

# Bulletin Home

The Undergraduate Bulletin is the most current information available about undergraduate programs at University of Wisconsin-Stout. Information regarding fees, admission, graduation requirements, names, telephone numbers, and course offerings, is subject to change.

## Accreditation

UW-Stout is accredited by the North Central Association of Colleges and Secondary Schools.

The Higher Learning Commission of the North  
Central Association of Colleges and Schools  
Commission on Institutions of Higher Education  
230 South La Salle Street, Suite 7-500  
Chicago, IL 60602-2504

Phone: 800/621-7740

Individual academic programs may also receive accreditation from other agencies. Learn more about accreditation on the Curriculum website.

## Minnesota Student Addendum

The University of Wisconsin-Stout is registered as a public institution with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

# The University

## UW-Stout

UW-Stout is one of 13 publicly supported universities in the University of Wisconsin System. It was founded as a private institution in 1891 by James Huff Stout. A Menomonie industrialist and a man of great vision, he saw that students in America's developing industrial society needed a different kind of education, an education broader than that offered by the traditional curriculum. Since its founding, UW-Stout has gained a position of national leadership in its specialized areas. Although UW-Stout is a career-oriented university, the humanities, social and natural sciences are key parts of the total educational program.

## UW-Stout's Special Mission

UW-Stout, as a special mission institution, serves a unique role in the UW System. UW-Stout is characterized by a distinctive array of programs leading to professional careers focused on the needs of society. The university offers undergraduate and graduate programs leading to professional careers in industry, commerce, education and human services through the study of technology, applied mathematics and science, art, business, industrial management, human behavior, family and consumer sciences, and manufacturing-related engineering and technologies. These programs are presented through an approach to learning which involves integration of theory, practice and experimentation. Extending UW-Stout's mission into the future requires that instruction, research and public service programs be adapted and modified as the needs of society change.

Learn more about UW-Stout's Mission, Vision and Values.

## Wisconsin's Polytechnic University

University of Wisconsin-Stout is a comprehensive, career-focused polytechnic university where students, faculty and staff use applied learning, scientific theory and research to solve real-world problems, grow the state economy and serve society. Our tenets:

**Career Focus:** A polytechnic university offers a comprehensive curriculum that prepares graduates for professional careers.

**Applied Learning:** A polytechnic university blends theory with practice to produce innovative solutions to real world problems.

**Collaboration:** A polytechnic university works closely with business, industry and other educational institutions to benefit students and grow the economy.

## **Recognized Quality**

In 2001, UW-Stout became the first university in the nation to receive the Malcolm Baldrige National Quality Award, America's highest honor for performance excellence and quality achievement.

The university's mission driven, market smart focus promotes collaborative leadership and an inclusive strategic planning process. Baldrige Award criteria are used by organizations worldwide. Winning organizations become quality advocates, informing thousands about the criteria benefits, including better employee relations, higher productivity and greater customer satisfaction.

## **The Faculty and Academic Staff**

Because UW-Stout has specialized in certain areas, we have developed a staff of individuals nationally recognized in their fields. All classes are taught by the faculty and academic staff except for a small number of laboratory courses which are taught by highly qualified graduate assistants. With a staff of 489, the student-teacher ratio is about 17:1. The faculty's commitment to provide extra help to students is, one of UW-Stout's proudest traditions.

## **Students**

In terms of enrollment, UW-Stout is not a local or state school. Its 9,535 students come from 44 states and 42 nations. Students have a major voice in the affairs of the university and sit on important university committees. Besides regular and informal meetings with students, the university's chancellor has an "open door policy." Students participate in more than 165 clubs and organizations on campus, including national fraternities and sororities.

## **Facilities**

Modern and well-equipped facilities mark UW-Stout's 125-acre campus. We are proud of our laboratory-intensive programs. More than 240 laboratories are available for study and research in the areas of electronics, power, industrial management, industrial design, industrial graphics, packaging, plastics, graphic communications and telecommunications.

Located in the center of the city of Menomonie, adjacent to the downtown business district and Lake Menomin, UW-Stout offers an attractive, convenient and accessible campus setting.

## **The Community**

Located in scenic western Wisconsin, Menomonie has a population of approximately 16,000. The area's natural beauty, with lakes, rivers and hills, provides many year-round recreational and sports opportunities. Major entertainment and cultural activities are available on campus, in the community and in the nearby Minneapolis-St. Paul metropolitan area, about an hour away.

## **Admission**

## Information for All Applicants

This section provides general information for degree-seeking students. If you wish to take classes for professional or personal development, you need only read the section titled "Special Students."

If you will be taking classes to work toward a degree, you must apply for admission to the university. You can obtain a UW System Application for Admission form by contacting the Office of Admissions at UW-Stout, contacting any Wisconsin or Minnesota high school guidance office, or online at [www.apply.wisconsin.edu](http://www.apply.wisconsin.edu).

Applications to UW-Stout may be submitted beginning September 1 for admission to the following fall term. There is no deadline for applications; however, we are limited in the number of students we can accept. Applicants may declare a major on the application form or apply as "undecided."

Keep in mind that you may also have to meet entry standards set by a school or department. See the sections on the individual programs for more information.

UW-Stout will keep you informed of pertinent changes at the university. If you have the chance to study part time elsewhere, you will be able to check the transferability of your course work to UW-Stout by contacting the university's Admissions Office. If transferring from a UW System institution, check online at the Transfer Wisconsin website.

**Notice:** You must provide the university with accurate information about your personal and educational history. UW-Stout's policy is that students who intentionally falsify or omit information given as part of their university record will be suspended.

### Auditing Classes

If you are not concerned about receiving college credit for courses you take, you may audit classes. Wisconsin residents may audit classes for 30 percent of the normal per credit academic fee. The cost for nonresidents is 50 percent of the normal fee. Senior citizens age 60 or older by the first day of class only pay textbook and lab fees for audit credits and laptops.

You may audit classes provided that you apply for admission; the class teacher approves your request to audit the class; you pay any special costs for course instruction other than the normal tuition; and the university will not be required to provide additional classroom or laboratory space for you, and will not realize increased instructional costs.

You will receive only provisional permission to attend classes until course registration is completed. You may not change your admission status and take the course for credit once the class has started. A course which has been audited may not be retaken for credit. You will be subject to Regent, university and student government regulations, just like students who are taking courses for credit.

**Note:** As with all students attending the university, special students and auditors must provide UW-Stout with accurate information about their personal and educational history. The university policy is that students who intentionally falsify or omit information given as part of their university record will be suspended.

## Admission Categories

Admission procedures and standards vary somewhat from group to group. Following is a definition of each category. Find the category that applies to you (definitions below) and select the appropriate tab at the top of this page:

- **Freshmen:** graduates of high schools in the United States and those who will be graduating, who have not attended another university or technical college or school after high school.
- **Transfer students:** applicants who have attended another university, technical or community college beginning the fall semester after high school graduation, and wish to transfer to UW-Stout.
- **Re-entry students:** students who have attended UW-Stout in the past and wish to again take classes at the university.
- **Special students:** students (including those still in high school) who wish to further their education, but are not seeking a degree from UW-Stout.
- **Youth Options/Course Options:** high school students who wish to take university courses under the Youth Options/Course Options program. Students must apply both through their high school and UW-Stout for permission to enroll.
- **International students:** students from countries other than the United States who wish to attend UW-Stout.

## Freshman Students

1. Applications and transcripts may be submitted as early as September 1 for admission the following fall, or early May for the following spring term. UW-Stout enrollments are limited, so it is important that you plan and apply early. Students applying for the Graphic Design and Interactive Media, B.F.A., and the Game Design and Development-Computer Science, B.S. programs must submit their complete application materials and portfolio by the first Monday in January (check program website for more instruction).
2. You must be a graduate from a recognized high school or equivalent.
3. Admission will be based on multiple criteria including academic rigor, academic GPA, trend in grades, rank in class and ACT/SAT scores. Non-academic factors will also be considered. We conduct a comprehensive review and no single factor will eliminate or guarantee admission. Applicants must complete the high school course requirements as determined by the University of Wisconsin System.
  - a. four credits of English: emphasizing literature, composition, rhetoric and speech.
  - b. three credits of Mathematics: algebra I, geometry and algebra II (Integrated Math 1, 2 and 3). A fourth year is strongly encouraged for majors in science, technology, engineering and mathematics.
  - c. three credits of Natural Science: biology, chemistry and physics.
  - d. three credits of Social Science/History.
  - e. four credits of Electives: chosen from the areas listed above, or foreign language, business, family/consumer education, art and design, and computer applications/programming.
4. Applicants must earn good grades and maintain a high level of achievement in challenging coursework.
5. The pattern of grades over time is important and an increasingly strong academic record can improve the likelihood of admission.
6. Class rank is requested of all applicants (if available) and we consider rank along with other factors.
7. A copy of your ACT score is also required of all applicants to be considered with other factors. We will also accept the SAT.
8. All freshmen must take the ACT or SAT, however, the test is not the only criterion for admission. The admission test requirement may be waived if you have been out of high school for two or more years, are age 21 or older, or are an international student.
9. In addition to academic achievement, the Admissions Office will consider the following as part of the review of an application: leadership, volunteerism, personal statement, honors and awards, letters of recommendation, socio-economic background, extracurricular activities, diversity of personal background, work experience and military experience.
10. New freshmen are likely to be admitted if they rank in the top 50 percent of their graduating class or have earned a minimum ACT composite score of 22 (or SAT equivalent).
11. The following programs are competitive and require further academic achievement: Applied Mathematics and Computer Science, B.S.; Applied Science, B.S.; Computer Engineering, B.S.; Game Design and Development-Art, B.F.A. Game Design and Development-Computer Science, B.S.; Graphic Design and Interactive Media, B.F.A.; Manufacturing Engineering, B.S.; Mechanical Engineering, B.S.; Packaging, B.S.; Plastics Engineering, B.S.; and Supply Chain Management, B.S. - the additional criteria for these programs can be found online

## Non-Traditional Admission Requirements

Applicants who have been out of school for two years or more may also be considered for admission if, on the basis of other factors, they appear to have a reasonable probability of success in college. Applicants with a GED or High School Equivalency Diploma will also be considered for admission. It is recommended that applicants have a GED examination average score of 50 or better to be considered for admission to the university.

## Transfer Students

For enrollment management purposes the number of transfer students admitted may be controlled. In such cases, institutional policy will determine the criteria by which limitations of access shall be applied, but preference for admission will be given to students transferring from UW Colleges and from other UW institutions where the student's desired major or program is not offered, subject to the limits of UW-Stout's enrollment target.

Transfer applicants must demonstrate that they are prepared to do satisfactory academic work at UW-Stout and that as members of the campus community, they will benefit from and enrich the educational environment and enhance the quality of the institution. Each applicant's file will be given a comprehensive review. Academic information considered will include the student's post-secondary academic records, and may also include high school records, standardized test scores, and/or other relevant academic information.

While academic factors are the most important consideration, other factors may also be considered. These factors include, but are not limited to, student experiences, work experience, leadership qualities, motivation, community service, special talents, status as a non-traditional or returning adult, status as a veteran of the U.S. military, whether the applicant is socio-economically disadvantaged, and whether the applicant is a member of a historically underrepresented racial or ethnic group.

College, school or program needs may set standards for entry to a program in order to achieve enrollment management goals. Such standards will apply equally to continuing students and transfer students.

- The university will need an official transcript from each post-secondary institution you have attended. High school transcripts are also required if, at the point of application, the student has not already earned a bachelor's degree. Applications and transcripts may be submitted as early as September for admission the following fall, and early May for the following spring. Apply early so you can register for classes and complete the financial aid application process in a timely manner. UW-Stout enrollments are limited, so it's important that you plan and apply early.
  - You will be considered as transfer students once you have begun college level coursework beginning with the fall semester after you graduate from high school.
  - A minimum of 12 academic college level (not remedial) transferrable credits is desired to be considered on the basis of their college coursework alone.
  - You are likely to be admitted if you have a cumulative grade point average of 2.50 on a 4.0 scale from the last college/university attended.
  - If you have a cumulative grade point average of 2.2- 2.49 on a 4.0 scale from the last college/university attended you may be considered for admission.
  - Students with a cumulative grade point average of 2.2-2.49 (on a 4.0 scale) from the last college/university attended may be considered for admission in good standing or on probation.
  - Students with fewer than 30 transferable credits and a cumulative grade point average less than a 2.2 (on a 4.0 scale) from the last college/university attended may be admitted to UW-Stout if they had been admissible at UW-Stout as a new freshman and if they would have been eligible to continue at UW-Stout had they achieved their existing academic record here. These students may be placed on a 'wait list' and admitted on probation if space is available.
1. Credit is generally awarded for college level coursework completed at institutions accredited by a regional or national accrediting organization by the Council for Higher Education Accreditation (CHEA). Foreign institutions must be recognized by the Ministry of Education (or equivalent) in that country. Credit earned in institutions of higher education which are not accredited is generally not accepted for transfer. However, credit may be granted for post-secondary work from non-accredited institutions by examination and/or upon departmental evaluation of course syllabi and other program information. Courses must be similar in nature, level and content to a course in our undergraduate

curriculum and applicable to one of our academic programs; this includes courses that are technical, occupational or vocational in nature. Continuing education courses and courses that are remedial are not transferable. Graduate-level courses or courses that are doctrinal in nature may be considered on a case-by-case basis.

- All credit that is transcribed is evaluated, including what is awarded for experiential learning or other forms of prior learning, or relies on the evaluation of responsible third parties. Dual credit courses or programs for high school students are considered equivalent in learning outcomes and levels in achievement to its higher education curriculum by means of receipt of an official college transcript from a regionally accredited institution.
- Credit may be granted for educational accomplishments attained in extra-institutional settings (e.g., military, professional development, work-place training, and others) on the basis of an internally developed assessment such as department exams and portfolio review; internal review of recommendations from organizations such as the American Council on Education's (ACE) Center for Adult Learning and Educational Credentials or the Council for Adult and Experiential Learning (CAEL) or through the National College Credit Recommendation Service (NCCRS). Such credit may be required to appear on an official transcript from said organization awarding/recommending college level credit.
- Students may have the opportunity to demonstrate competence through the use of internally and externally developed tests, portfolio assessment procedures and other competency based alternatives.

### **Additional Requirements**

The following programs are competitive and require further academic achievement: Applied Mathematics and Computer Science, B.S. ; Applied Science, B.S.; Art Education, B.S. ; Computer Engineering, B.S.; Dietetics, B.S.; Game Design and Development-Art, B.F.A. ; Game Design and Development-Computer Science, B.S.; Manufacturing Engineering, B.S.; Mechanical Engineering, B.S.; Packaging, B.S.; Plastics Engineering, B.S.; and Supply Chain Management, B.S. - the additional criteria for these programs can be found online.

All students wishing to transfer into a teacher education program must have a 2.75 cumulative grade point average and will be admitted as a Pre-Education student. Subsequent acceptance into a teacher education major and enrollment in professional education coursework will require successful completion of Benchmark I. More information on Benchmark I is available on the School of Education website.

Students applying for Graphic Design and Interactive Media, B.F.A., must submit their complete application materials and portfolio by the second Monday in January.

### **Articulation Agreements**

UW-Stout maintains program articulation agreements with various technical and community colleges in Wisconsin and neighboring states. If you are a student enrolled in an A.A.S. or A.S. program and considering a transfer to UW-Stout, call the Office of Admissions at 715-232-1787 or check the online guide to Transferring to UW-Stout for the most up-to-date listing of program agreements.

### **Credit for Prior Learning**

Credit for prior learning that is internally assessed and transcribed as a course equivalency by another institution will be evaluated for transfer by UW-Stout on the same basis as courses taken at that institution. These credits may include:

- **Retroactive Credit** for foreign language
- **Test-Out Credit** for that institution's actual course (as opposed to elective credit)

For credit earned by any means of any other test such as Advanced Placement, College Level Examination Program (CLEP), and International Baccalaureate (IB), you must provide UW-Stout with an original score report to receive credit pre-determined by departmental review based on score received.

Learn more at the Prior Learning Assessment website.

### **Transfer Credit Principles**

Credit is generally awarded for college level coursework completed at institutions accredited by a regional or national accrediting organization by the Council for Higher Education (CHEA). Foreign institutions must be recognized by the Ministry of Education (or equivalent) in that country. Credit earned in institutions of higher education which are not accredited is generally not accepted for transfer. However, credit may be granted for post-secondary work from non-accredited institutions by examination and/or upon departmental evaluation of course syllabi and other program information. Courses must be similar in nature, level and content to a course in our undergraduate curriculum and applicable to one of our academic programs. This includes courses that are technical, occupational or vocational in nature. Continuing education courses and courses that are remedial are not transferable. Graduate level courses or courses that are doctrinal in nature may be considered on a case-by-case basis.

### **Principles of Accommodation**

1. Students transferring having already earned a Bachelor's degree, a UW associate degree, an Associate of Arts degree from a Minnesota college or a WTCS liberal arts/collegiate transfer programs associate of arts/associate of science degrees that specifically align with the associate degrees awarded by UW institutions;
2. Transfer of general education/liberal arts requirements in terms of broad academic areas (social sciences, humanities, natural sciences, etc.) as well as specific courses shall be recognized.
  - a. will be considered to have all general education requirements complete with the exception of any specific requirements for their degree program.
    - students with associate degrees from states other than Wisconsin or Minnesota will be considered on a case-by-case basis.
  - b. will be considered to have completed the graduation requirements of Racial and Ethnic Studies and Global Perspective.
  - c. may not have competency requirements or levels of proficiency (e.g., English composition, speech, foreign language, math, quantitative reasoning) satisfied.
3. Credit may be awarded in transfer for courses for which we do not have a comparable department or curricular area, or for which we do not have a direct course equivalent. Where appropriate, these credits should apply toward satisfying general education and other degree requirements. When applying a course toward general education/breadth requirements, it generally applies in the same category as similar courses offered at UW-Stout. However, if the course fulfills a different category at the previous institution and the student requests that the original designation be applied the request should be approved where appropriate.
4. Student course grades may be used as a factor to determine if, and how, transfer credit is applied but the same principles should be applied to both transfer and continuing students.
5. If a student changes his/her academic major or program, all transfer credits may be reevaluated to determine if, and how, they apply to the new major or program.
6. When a student transfers, an evaluation of the transfer work will be done based on official transcript(s) from each institution the student attended. The student is responsible for submitting official transcript(s) from each previously attended institution to UW-Stout for transfer evaluation. The National Student Clearinghouse will be checked to verify attendance at post-secondary institutions previously attended. Failure to list all institutions may result in disciplinary action, rescission of admission, and/or invalidation of credits or degrees earned.

7. Students transferring from within the UW System may be permitted to graduate using the catalog requirements in effect at the time of their matriculation at their first UW institution.
8. Transfer credits will be evaluated by UW-Stout on a course-by-course basis to determine if and whether credits will apply beyond the satisfaction of general education breadth requirements.

### **UW System Transfer Students**

- UW-Stout works with the UW System two-year colleges and their UW Colleges Guaranteed Transfer Program. If you choose to participate in this program, you are guaranteed admission to UW-Stout, provided you meet the provisions of the policy.
- UW System College counselors can help you select course work that will relate to your planned major at UW-Stout. Under UW System policy, you may transfer up to half the number of credits required for graduation in your major at UW-Stout.
- Students may generally transfer up to 72 degree credits earned at non-baccalaureate institutions. Additional credits may be accepted toward the degree where appropriate with department approval. This does not alter policies concerning credits to be earned in residence
- UW Colleges advising guides are available to assist in course choices.

### **Technical and Community College Transfer Students**

- If you are transferring from a technical college, UW-Stout credit may be granted in transfer for general education/breadth coursework (i.e. in communications, behavioral sciences, social sciences, mathematics, and natural science) offered within a Wisconsin technical college applied associate degree or college parallel programs, and similar programs from other states.
- Credit may be granted on a course-by-course basis for occupational, technical and vocational coursework leading to an applied associate degree from WTCS programs if there is not an articulation agreement in place. If you're transferring from such a program, UW-Stout may accept some of your technical credits.

## **Re-entry Students**

There are two types of re-entry students: Regular re-entry students are those who have completed no transferable credits from any post-secondary institution since they last attended UW-Stout. Transfer re-entry students are those who have completed transferable credits at a post-secondary institution since they last attended UW-Stout.

### **Regular re-entry students:**

1. Complete the UW System Application for Admission form and submit it to the Admissions Office. If you left the university in good standing, you may be readmitted as enrollment management goals allow.
2. If you left on academic probation, you may be readmitted on academic probation, if there is room for you in your chosen program.
3. The director of admissions or a designee will review applications from re-entry students who were academically dismissed from the university. Students currently on academic dismissal must submit a letter of appeal along with their application. If the application for readmission is denied, the decision may be appealed to the Dean of Students Office.

### **Transfer re-entry students:**

1. Complete the UW System Application for Admission and submit it to the Admissions Office. If you left the university in good standing or on probation, you will be readmitted in the same status, provided you are eligible to return to the institution you last attended, and provided.



2. Submit official transcripts from each institution you attended since your last attendance at UW-Stout.
3. If you left UW-Stout because of academic dismissal, you may be readmitted on probation. Students currently on academic dismissal must submit a letter of appeal long with their application. Decisions will be made on a case by case basis at the discretion of the director of admissions and considering enrollment targets. Students are required to submit a letter of appeal.
4. If your transfer grade point average is less than 2.20, you may be denied re-admittance to UW-Stout. Denial decisions may be appealed to the Dean of Students Office.

## Special Students

This diverse group of students may include mid-career professionals seeking certification for a changing technology, community members seeking courses for personal fulfillment, high school students taking classes not offered at a high school, guests and auditors. Special students may be admitted as enrollment management goals permit.

1. To be admitted as a special student, simply indicate that status on the application for admission. You do not need to indicate a major, submit transcripts, take the ACT, or pay the application fee. High school students admitted as special students must gain the approval of their parents and their high school, and submit a high school transcript.
2. As a special student, you must take the English and math placement tests before enrolling in an English or math course.
3. You are not eligible for financial aid.
4. You may request to change your status to degree-seeking student after you have completed 12 credits. You may accumulate a maximum of 29 credits as a special student.
5. To change to become a degree-seeking student, you will have to complete the application process required of new students by completing the UW System Application for Admission - submitting the appropriate information as New Freshman or Transfer Student as required.
6. High school students who wish to take classes at the university must rank in the top 50 percent of their high school class or have an ACT composite score of 22 or better, or SAT equivalent.

## Youth Options/Course Options Program

The Youth Options/Course Options program serves high school students who wish to take classes not offered at a high school.

1. To be admitted as a Youth Options/Course Options student, simply indicate that status on the application for admission. You do not need to indicate a major, take the ACT or SAT or pay the application fee. You must gain the approval of your parents and your high school.
2. You must take the English and math placement tests before enrolling in an English or math course.
3. You are not eligible for financial aid.
4. You must rank in the top 50 percent of your high school class or have an ACT composite score of 22 or better, or SAT equivalent.

## International Students

1. All potential international students should have better than average academic records.
2. All applicants must present the university with official copies of their academic record.  
First-year students must send certified copies of certificates, diplomas or degrees earned. These official records must be equal to a United States high school (secondary school) graduation for consideration.

Transfer students must submit certified records of their post-secondary academic work. The records must show the courses the students have taken and the grades they have earned. The university will not grant credit for courses unless there is evidence that the students have satisfactorily completed them.

Credit may be granted to international students if the institution they attended is listed in either the International Handbook of Universities or the Commonwealth Universities Handbook. Credit from institutions not listed in these publications may be transferred only upon the recommendation of the appropriate department.

3. The university will deny admission to students who submit records with any alterations or irregularities.
4. Additional records presented after the student has enrolled will not be considered for transfer.
5. Students from non-English speaking countries are required to take the Test of English as a Foreign Language (TOEFL). Applicants will need a minimum score of 70 iBT, 500 paper based (or 173 score on computer-based test) to enroll in full-time study.

For information on taking the TOEFL, write to:

TOEFL Services - Educational Testing Service  
PO Box 6151  
Princeton, NJ, USA 08541-6151 USA

The TOEFL will be waived if students have completed UW-Stout's ESLI program or an ESL program from an accredited college or university or other program approved by UW-Stout.

6. All international students must show evidence that they have adequate finances to undertake a degree program at UW-Stout.
7. As a condition of admission, international students whose sponsors have a history of delinquency in payment of fees must place on deposit an amount approximately equal to the institution's non-resident tuition and fees for a 12-month period, which includes two semesters and an eight-week summer term. Applicants who must meet this requirement will be notified when the university receives their applications.
8. Questions about this policy may be addressed to the Office of Student Business Services or to the Office of International Education.

## **Scholastic Standards**

### **Student Handbook**

The One Stop Student Resource website serves as UW-Stout's Student Handbook. The site is a portal for information on registration, finances, academic planning and other resources. It includes a listing of important dates and quick links for important student logins, calendars and technical assistance.

### **Semester Credit**

UW-Stout defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates: [1] At least 750 minutes of classroom or direct faculty instruction and a minimum of 1,500 minutes of out-of-class student work for one semester credit hour, or the equivalent amount of work over a different amount of time (e.g. compressed courses); or [2] At least an equivalent amount of work as required in part one [1] of this definition for other academic activities as established by UW-Stout, including distance education, online, hybrid, or other indirect faculty instruction, laboratory work, internships, co-op experiences, studio work, and other academic work leading to the award of credit hours. This definition of the semester credit hour applies to all academic credit bearing activities at all levels (graduate and undergraduate). In order to receive a degree, you must not only gain the required number of credits in the program you are pursuing, but also must attain a certain standard of scholarship. (See also "Suspension and Probation.")

### **Credit by Examination**

You may be able to receive credit by demonstrating your competence through examination. External examinations include the College Level Examination Program (CLEP) and the Proficiency Examination Program (PEP). For further information on external examinations, contact the Counseling Center.

You may also receive credit through the "test out" procedures developed by various university academic departments. For more information, contact the appropriate school or department office.

If you attempt to test out of a course, you will be charged a testing fee regardless if credit is earned or not.

## **Credit Registration and Overload Policy**

Courses are designed and graduation requirements are established so that a normal semester credit load for undergraduates is 16 to 18 credits. Early registration will be limited to 18 credits. Additional credits may be added at the beginning of the term. You should register for only those classes which you fully intend to complete. If you register for more than 20 credits, you must have an "Overload Permit" signed by your program director on file with the registrar at the time you go over 20 credits.

You may not register for classes that conflict with other classes on your schedule. Eighteen credits is considered a maximum load for undergraduate students with less than 2.25 cumulative grade point average. Enrollment for any additional credits requires consultation with your program director or the coordinator of undeclared/undecided academic advisement if you are not enrolled in a degree program.

The Registration and Records Office is responsible for the application and interpretations of this policy. You will be notified of non-compliance and any subsequent withdrawals made to bring you into compliance should you not answer the notification.

## **Retroactive Credit for Foreign Language**

Students who earn a grade of "B" (3.0) or better in foreign language courses would also receive credit for the lower level foreign language course or courses associated with that course.

## **Math and English Placement**

**Remedial Placement Students** who are not transferring credits in math or English must take the regional math and English placement tests. These are given around the state during the spring semester. Make-up tests are given in the summer at announced times. Students who place into remedial math or English must successfully complete the course by the end of 30 credits or they will not be permitted to register.

English Placement Students who perform well on the placement tests may be placed in an advanced English class (ENGL-111 Freshman English--Honors I).

**Advanced Placement** UW-Stout grants credit for scores of three or greater on the College Board Advanced Placement test. In addition, students can receive credit for a specific course. For more information about advanced placement examinations, call the Office of Admissions at 715/232-1411.

## **Add/Drop Policy**

Even with careful planning, you may find you have to add or drop a class after the semester begins. To comply with accreditation and financial aid regulations, UW-Stout has a published add/drop policy.

The following serves as UW-Stout's procedures for adding or dropping classes within the guidelines of the policy:

Students are expected to complete courses for which they register. Students who wish to adjust their class schedules may add or drop classes before the end of the second week of semester classes and before the end of the first week of quarter classes. Drops made during the first two weeks of a semester course or the first week of a quarter course will not appear on a student's transcript. If students deem it necessary to reduce their program after the normal add/drop period, they should do so as early as possible.

"Withdrawal" or "W" is a drop grade given to students who drop a course after the Drop Retain Record Date given in Access Stout and before the Drop with Penalty Date. The **Drop Retain Record Date** means that a class dropped on or before this date will be retained on your academic record with a status of dropped. After this date a drop grade of W will be assigned to the class.

"WU" or "Withdrawal Unsatisfactory" is a drop grade given to students who drop a course after the **Drop with Penalty Date** but before the **Drop with Greater Penalty Date** (class end date) given in Access Stout, which is allowed only when there are extenuating circumstances. The **Drop with Penalty** means a class dropped after this date will appear on your transcript and a drop grade of WU will be assigned to the class.

**Drop with Greater Penalty Date** is the last date to drop a class for the semester. After this date classes can no longer be dropped. For help with finding these dates, use the step by step guide to view your course deadlines.

These drop grades are issued after the drop is processed. The drop grade is posted on the student transcript, however, it does not affect their GPA.

## Grade Point and Symbols

Grade	Grade Points
A	= 4.00
A-	= 3.67
B+	= 3.33
B	= 3.00
B-	= 2.67
C+	= 2.33
C	= 2.00
C-	= 1.67
D+	= 1.33
D	= 1.00
D-	= 0.67
F, FS, FN	= 0.00
O	= Outstanding (no grade points)
S	= Satisfactory (no grade points)
U	= Unsatisfactory (no grade points)
W	= "Withdrawal" or "W" is a drop grade given to students who drop a course after the Drop Retain Record Date given in Access Stout and before the Drop with Penalty date. The Drop Retain Record Date means that a class dropped on or before this date will be retained on your academic record with a status of dropped. After this date a drop grade of W will be assigned to the class. Find your course deadlines on Access Stout. A W will appear on a students transcript but will not affect their GPA.

I	= Incomplete
CR	= Credit (no grade points)
F, FS, FN	= Fail by attempt, Fail by stopped attending class, Fail by never attending class
IP	= In Progress (approved courses only)
AU	= Audit - no credit awarded
NC	= No Credit
WU	= "WU" or "Withdrawal Unsatisfactory" is a drop grade given to students who drop a course after the Drop with Penalty date but before the Drop with Greater Penalty date(class end date) given in Access Stout, which is allowed only when there are extenuating circumstances. The Drop with Penalty means a class dropped after this date will appear on your transcript and a drop grade of WU will be assigned to the class. A WU will appear on a students transcript but will not affect their GPA.
WD	= Complete term withdrawal from the university

## **Accommodating Religious Beliefs**

UW-Stout honors individuals' religious beliefs. If scheduling of tests or other mandatory activities interferes with students' religious observances, students may request alternative arrangements.

Within the first three weeks of class, students must notify their instructors if there will be days or dates when their religious activities will prevent them from participating in academic events. For summer sessions or short courses, students must notify their instructors within the first week of class.

The university accepts, at face value, the sincerity of students' religious beliefs. Information students provide about their religion will be kept confidential.

Once instructors know of students' needs, they will be able to schedule make-up examinations or other course requirements, before or after the regularly scheduled examination or other requirement.

If students believe their religious beliefs have not been accommodated, they may file a grievance. For more information about the policy or the grievance procedure, contact the Dean of Students Office at extension 1181.

## **Procedure for Withdrawal from UW-Stout**

A withdrawal is completely dropping all of your registered classes for a given term. Withdrawal should be undertaken only after serious consideration. If you intend to withdraw from the university, you can process the request by logging into your Student Center in Access Stout and selecting Term Withdrawal from the drop-down menu. If you fail to withdraw officially from the university, you will receive a grade of "F" in all your courses. (See the grading policy on the Registration and Records website.)

## **Suspension and Probation**

Grade point requirements for graduation vary by major. Minimum acceptable standards for retention are defined as follows:

### **Good Academic Standing**

A cumulative grade point average (GPA) of 2.000 or greater. Selected majors require a cumulative GPA greater than 2.0 for graduation.

## **Probation**

### **Academic Probation**

A temporary status due to low academic grades. Improvement in academic grades is needed for continued enrollment in the university. A student is placed on probation due to one of the following conditions:

Cumulative GPA is lower than 2.000

Conditionally admitted as a transfer or new freshman

Readmitted after leaving UW-Stout while on probation or when dismissed for academic reasons.

## **Dismissal**

### **Academic Dismissal**

Termination of enrollment in the University of Wisconsin-Stout due to one of the following conditions:

Cumulative GPA is less than 2.000 at the end of two successive semesters.

If a student earns a 2.500 or higher GPA with 12 or more earned credits in the 2nd semester of Academic Probation, but the cumulative GPA is below 2.000 for 2 successive semesters, the student will be granted an additional or third semester on Academic Probation.

GPA for one semester is less than 1.000. Academic Probation status is not a prerequisite for dismissal due to this low GPA.

### **Readmission Application Timeline Following Dismissal**

One semester must lapse if academically dismissed.

Two years must lapse if academically dismissed, readmitted and failed a second time to earn the required grade point average.

### **Appeal Process to Dismissal**

If circumstances were so unusual and out-of-the ordinary that academic performance was significantly and temporarily impacted, the dismissal decision maybe appealed. The appeal process is on-line and handled by the Dean of Students Office.

## **Requirements for Graduation**

The semester credit hours required for graduation are stated under the program of study for each major. You are responsible for knowing and meeting the requirements for graduation. To fill the minimum residence requirement, you must earn 32 semester hours of credit in residence at UW-Stout. One semester before graduation, you must apply to graduate via Access Stout.

## **Graduating with Honors**

Undergraduate honors are based upon scholarship. The following designations are used:

**Cum Laude** » 3.5 - 3.699 grade point average  
**Magna Cum Laude** » 3.7 - 3.899 grade point average  
**Summa Cum Laude** » 3.9 - 4.00 grade point average

**A minimum cumulative grade point average of 3.5 must have been earned in all credits from all institutions attended.**

For commencement purposes, the cumulative grade point average earned at the end of the semester preceding the commencement ceremony will determine recognition at the commencement ceremony. However, honors will be officially determined when all coursework has been completed. Honors will be listed in the student's transcript and will appear on the diploma.

## **Chancellor's Award**

The Chancellor's Award recognizes undergraduate students who receive a semester grade point average of 3.5 or greater on 12 or more academic, non-remedial credits. A special Four Star Recognition Award will be given to undergraduate students who attain a 4.0 average.

## **Tuition and Fees**

### **Fee Payment**

All students are required to complete a Fee Payment Agreement. All Wisconsin residents are also required to provide information on their marital status.

You are expected to pay all charges according to the Fee Payment Agreement. For the fall and spring terms, UW-Stout offers an opportunity to pay fees in two established installments. This program requires a 10 percent down payment within the 14th day of the term and the remainder within 30 days. For the Summer Session, 100 percent is due by the third Wednesday in July. For WinTerM, 100 percent is due by the second Wednesday in January.

The Fee Payment Agreement application is supplied online via Access Stout. Learn how to complete the agreement online at the Student Business Services website.

### **Semester Costs**

Undergraduate fees are set by the Board of Regents of the University of Wisconsin System and are subject to change. These fees incorporate tuition, segregated, textbook, and eStout. However, the schedule does not include special course fees charged in some courses. Students in the eStout program pay a per credit rate for tuition. All tuition and fees, room and food rates, and other charges are subject to change without notice. Tuition and fee information is online at the Student Business Services website.

### **Minnesota Students**

If you are a Minnesota resident and a new student at UW-Stout, you must submit a reciprocity application to Minnesota. Approval takes up to four weeks. If approved for reciprocity, you will be charged at the Minnesota resident tuition rate. The State of Minnesota has indicated that "reciprocity benefits will not be granted retroactively" and that "each student is responsible for the application process." Therefore, each new student must submit a correct application before the last day of the semester. Apply early to avoid complications. Students that have been in attendance at UW-Stout and have earned credits during the previous academic year will automatically have reciprocity renewed by the State of Minnesota. Reciprocity applications are available online at [www.mheso.state.mn.us](http://www.mheso.state.mn.us).

### **Auditing Classes**

Wisconsin residents under age 60 may audit classes for 30 percent of the normal per credit academic fee. The normal per credit academic fee is waived for Wisconsin residents age 60 or older by the first day of class. The cost for non-residents is 50 percent of the normal per credit academic fee. The cost for Minnesota Reciprocity students is 30 percent of the normal per credit Minnesota Reciprocity fee.

## **Refund on Fees**

Withdrawal from semester courses generates refunds based on the refund schedule set by the Board of Regents of the University of Wisconsin System. The amount of a refund is determined by the session length of a course and the date of the withdrawal or drop. The refund schedule can be found on the Student Business Services website. Refunds for room and food service charges are based on the date of withdrawal.

## **Graduation Fee**

Upon completion of 90 credits, student accounts will be charged a one time, non-refundable \$100 graduation fee. This fee pays for various costs, including final degree audit, diploma and cover, as well as other costs and accessories associated with the commencement exercises. Candidates will be assessed the fee regardless of commencement ceremony participation. The fee does not cover the cost of the cap and gown, which are available from the University Bookstore.

## **Unpaid Obligations**

Failure to meet financial obligations is a serious matter. Therefore, if you owe money to the university and fail to meet that obligation, financial penalties will be assessed and a hold will be placed on your account. You will not be allowed to register or receive transcripts until your delinquent accounts are paid in full.

## **Withdrawal Fee**

You will be charged a fee of \$50 for a first-week withdrawal, and \$100 for any withdrawal during the second week.

## **Financial Assistance**

- Financial Aid Office
- Applying For Aid
- Receiving Aid
- Basic Types of Financial Aid
- Financial Aid Policies

## **Financial Aid Office**

The Financial Aid Office provides year round assistance to students and their families who are seeking resources to cover educational expenses.

Staff members will help answer any questions about the application process, what types of aid may be available, and how to maintain eligibility so you can make the best choices for your educational funding.

## **Applying For Aid**



Complete the Free Application for Federal Student Aid (FAFSA) at [fafsa.gov](https://fafsa.gov) every year to determine your eligibility for aid. Be sure to check with the Financial Aid Office or Self-Service in Access Stout to ensure you have completed all the necessary materials.

## **Receiving Aid**

After your FAFSA has been reviewed and processed by the Financial Aid Office, you will receive an email notifying that your award is available for you to view in Access Stout.

## **Basic Types of Financial Aid**

### **Grants**

Grants are funds provided by federal, state or private sources that do not need to be repaid, provided that the enrollment period is completed. Grants are awarded based on a financial need and federal guidelines. The Free Application for Federal Student Aid (FAFSA) must be completed to be considered for all federal and state grants unless otherwise stated.

### **Scholarships**

Scholarships vary in amount and criteria for award. Scholarships may be based on academic performance, financial need, program of study, year in school, or many other factors. Students are generally responsible for their application process.

#### **Stout University Foundation Scholarships**

Stout Foundation scholarships are awarded based on an overall student profile, including participation in academic organizations and other groups, students' interest areas or financial need. Awards range from \$250 to \$8,500. Scholarship applications are due the first Monday of February. The following list describes specific scholarship opportunities for freshmen. A full list of scholarships and an application are available online.

#### **Other Scholarship Opportunities**

By investing a little time and energy, you can conduct your own scholarship search. The Financial Aid Office provides information on its website to help get you started.

### **Federal Work Study**

The Federal Work Study Program provides jobs for undergraduate and graduate students with financial need, allowing them to earn money to help pay educational expenses. Please note that these funds are typically used to pay for smaller expenses throughout the semester and will not be available to pay for tuition, housing and other charges due at the beginning of each term.

The maximum amount a student can earn while a work study student will be limited to the student's work study award. The awards are based on the student's need, timing of application, FAFSA information and fund limits.

### **Loans**

Loans are financial assistance that must be repaid. There are education loans available through the federal government and through private lenders. Each loan program has specific eligibility criteria, repayment, cancellation, and deferment conditions. The Free Application for Federal Student Aid (FAFSA) must be completed to be considered for all federal education loans.

In Access Stout you will need to respond to the financial aid awards given to you. You will accept or decline federal work study and loans. Grants will automatically be accepted for you.

If you accepted any loans, you will need to complete loan processing. You will have checklist items on your "To Do List" in Access Stout that will indicate you must complete Loan Entrance Counseling and sign a Master Promissory Note (MPN).

## **Financial Aid Policies**

### **Students' Rights and Responsibilities**

Students have a right to know:

- What financial aid is available, including federal, state and institutional aid
- That the information they give to the Financial Aid Office will be treated confidentially
- The cost of attendance and the policies for students who withdraw
- How their financial aid budget and financial need was determined (including how other resources affect their need)
- How their aid was calculated and awarded
- What types of aid they were awarded and the criteria used to award each financial aid program
- Which financial aid programs must be repaid and which do not
- They can have their financial need reviewed through the Re-evaluation process if their family circumstances have changed
- How satisfactory academic progress is determined and how it might affect their financial aid eligibility

Students have the responsibility to:

- Provide the Financial Aid Office with accurate information in a timely manner
- Provide any additional information requested for the processing of their financial aid file (such as Federal tax returns, verification worksheets, or other documentation)
- Read and understand all forms that they are asked to sign and keep a copy of such forms for their record
- Make satisfactory academic progress as determined by the Financial Aid Office
- Inform the Financial Aid Office of any additional financial aid they receive such as scholarships, outside grants, assistantship or other educational/tuition assistance
- Repay all loans according to the payment schedule. Students who default on a loan are not eligible for additional financial aid
- Perform their Federal Work-Study job in a satisfactory manner
- Know and comply with any refund procedures
- Inform the Financial Aid Office if their personal information changes such as:
  - Their permanent or local address
  - Their residency status
  - Their enrollment status (credit load)
  - Their classification (Undergraduate, graduate, second degree, special student)
  - Change in governmental benefits (veterans)

### **Withdrawal and Return to Title IV (R2t4) Policy**

Federal Title IV funds are awarded to a student under the assumption that he/she will attend school for the entire period for which the assistance is awarded. When a student withdraws from all of his/her courses, for any reason including medical withdrawals, he/she may no longer be eligible for the full amount of Title IV funds that he/she was originally scheduled to receive.

A student that withdraws from all courses prior to completing more than 60 percent of a semester may be required to repay a portion of the federal financial aid received for that term. A pro rata schedule is used to determine the amount of federal student aid funds the student will have earned at the time of the withdrawal.

The return of funds is based upon the concept that students earn their financial aid in proportion to the amount of time in which they are enrolled. Under this reasoning, a student who withdraws in the second week of classes has earned less of his/her financial aid than a student who withdraws in the seventh week. Once 60 percent of the semester is completed, a student is considered to have earned all of his financial aid and will not be required to return any funds.

The Student Business Services Office, in accordance with 34CFR Sec. 668.22 calculates the Return of Title IV Funds for any student receiving Title IV Aid and subsequently withdraws before the end of the enrollment period (i.e. term).

### **Official Withdrawal**

Students intending to officially withdraw should contact the Registration and Records Office. Students planning to enroll for the next semester will need to contact the Financial Aid Office to re-apply for financial aid for the following semester.

The official withdrawal date used to determine the return of funds calculation is maintained in the Registration and Records Office as well as within the PeopleSoft system. The "Student's Withdrawal Date" will be the date the student provides official notification of their intent to withdraw. The "Date of the Institution's Determination that the Student has Withdrawn" will be the date the Registration and Records office posts at the top of each Withdrawal list.

### **Unofficial Withdrawal**

The Financial Aid Office will assume that students that fail to earn a single grade in any of their classes for a term to have unofficially withdrawn. Students that receive all grades of "FS" "FN", "WU", "WS" or a combination will be considered to have unofficially withdrawn from the University. If all grades are "FN" (never attended) the student is ineligible for Title IV aid and all aid will be returned. The Financial Aid Office will process an R2T4 using the 50 percent point as the student's "Withdrawal Date".

The university has initiated a grading policy that will be used to distinguish between a student who earned a grade of "F" (awarded to students who complete the course but fail to achieve the course objectives) or a grade of "FS" (awarded to students who stopped attending) or "FN" (awarded to students who never attended). A student that earns at least one grade including an "F" grade will be considered to have completed the term and no R2T4 calculation would be required or performed.

### **Satisfactory Academic Progress (SAP)**

As a financial aid recipient, you are responsible to know there are limits to your eligibility to receive financial aid. You are reviewed for satisfactory academic progress in three areas:

- Minimum grade point average
- Minimum credits completed (67 percent rule)
- Maximum time frame

In order to maintain financial aid eligibility students who fail any of the tests above will not be eligible for federal or state financial aid. This includes all federal and state grants, federal student loans and the federal work-study program.

### **Standard for Grade Point Average**

Undergraduate students (including transfer students and those seeking a second degree) are required to maintain at least a cumulative 2.0 grade point average (GPA) throughout their enrollment until degree completion.

### **Standard for Minimum Credits Completed**

You must successfully complete at least 67 percent of all the credits you attempt to remain eligible for financial aid. To determine if you are meeting the requirement, divide your cumulative completed credits by your cumulative attempted credits. For example, if you enrolled in 15 credits at the beginning of your first semester and only successfully complete nine of those credits (9 divided by 15 is 60 percent), you would not meet the SAP standards. Your "attempted credits" is the number of credits you were enrolled in on the tenth day of class each semester. In reviewing for minimum credits completed, a grade of "D-" or better is considered successful completion. Incomplete grades ("I" and "IP"), failing grades ("F," "FN" and "FS"), withdrawn grades ("W," "WS" and "WU"), unreported grades, "no credit," or "audit" grades are counted as attempted credits, but not as completed credits.

### **Standard for Maximum Time Frame**

You are eligible for financial aid up to 150 percent of the minimum credit requirement of your program. If you fail to complete your undergraduate degree within the 150 percent maximum time frame, you will not be eligible for further financial aid. For example, if your undergraduate program requires 120 credits, you would no longer be eligible for financial aid when you attempt more than 180 credits ( $120 \times 150 \text{ percent} = 180$ ). "Attempted credits" are defined above. Credits transferred in are counted. If you add additional majors or minors than what is required for your degree or if you change your major, you are still held to the 150 percent maximum for financial aid eligibility. Transfer students who transfer in with 90 or more credits should consult with a financial aid counselor to determine future eligibility for financial aid. Special students (those who already have a bachelor's degree and are seeking a second degree) are eligible for financial aid for a maximum of 75 credits. If you fall in this category, you should confirm your aid eligibility with a Financial Aid Counselor.

### **UW System Code of Conduct**

UW-Stout participates in federal student loan programs. We also certify private loans for students who need to borrow beyond the federal loan limits. We abide by the UW Regent Code of Conduct related to student loan borrowing.

## **Services for Students**

### **Athletics**

The intercollegiate athletic program emphasizes educational values for the participants and provides a laboratory for students in the coaching certification program. UW-Stout is a member of the Wisconsin Intercollegiate Athletic Conference (WIAC) and is affiliated with the National Collegiate Athletic Association-Division III. The university sponsors nine women's and seven men's varsity teams. Women's teams include basketball, cross country, golf, gymnastics, soccer, softball, tennis, track and field, and volleyball. Men's teams are baseball, basketball, cross country, football, golf, hockey, and track and field. More information is available at UW-Stout Athletics website.

### **International Education**

UW-Stout is committed to international education and the exchange of ideas and cultures among students, faculty and the community. The university welcomes international students and encourages study abroad. Many of Stout's majors lead to careers that require an understanding of people and cultures in the global community.

Students from more than 40 nations attend UW-Stout each year. More than half of the international student body at UW-Stout pursues graduate degrees.

Office of International Education International programs and student activities are coordinated through the Office of International Education (715/232-2132). This office coordinates all overseas involvement and provides overseas opportunities for students, faculty and staff. Learn more at the Office of International Education website.

## **International Student Services**

The special needs of international students are met through professional and referral services provided by the Office of International Education. These services include confidential personal counseling on immigration matters, financial matters, academic questions, social customs and personal concerns. Other services that promote cross-cultural understanding include new student orientation, problem solving and liaison activities in the university and Menomonie area community. Learn more at the International Student Services website.

## **University Library**

The University Library has a collection of more than a million items, including online full-text resources, videos, periodicals, and books. Access is available to more than 35 million items through Resource Sharing from other UW libraries.

The library has specialized equipment for printing, scanning, and e-portfolio work. Equipment is available for checkout including digital cameras, tripods, microphones, digital projectors, laptop chargers, and a variety of other electronic equipment and cords. More than 40 desktop computers are on hand in the Library. The library provides an inviting atmosphere for study and contemplation. A food cart is available in the lobby during the academic year. Lounge furniture, quiet study spaces and group study rooms with large display screens are available throughout the library. The library is open 94 hours per week during the semesters. Staff are available to assist users in their research and information needs.

The Library also hosts the GIS lab and the Gaming and Digital Innovation Lab for campus.

More information is available on the University Library website.

## **Off-Campus Housing**

The Stout Student Association provides information about available off-campus housing on its website. Other sources of local housing information are the Stoutonia and the Dunn County News. If you plan to live off campus, you may find it useful to visit Menomonie to secure the type of housing you desire.

## **Residence Halls**

Residence hall living is a meaningful part of your life at UW-Stout. With the help of a professionally trained staff, students achieve their goals through a variety of social, educational and recreational activities. Approximately 2,700 students live on campus. UW System policy requires freshmen and sophomores (60 credits or fewer who are not veterans, married or living with parents or guardian) to live in university residence halls. This policy is strictly enforced. Residence hall information will be sent you shortly after being admitted. We require a \$125 prepayment with each lease/contract. The lease/contract is valid for the entire academic year.

UW-Stout offers a First Year Experience program where all freshmen live together in the South campus residence halls. Upperclass students live primarily on North campus, including the suite-style Red Cedar Hall. Each suite consists of four bedrooms, a bathroom, and a living area and kitchenette. The building is fully air conditioned and has two elevators.

Each room is carpeted and furnished with a microwave oven, refrigerator, two single beds, dressers, bookcases, desks and chairs. Network access is available in all rooms. Cable TV is provided as well as local phone service - you must provide your own phone. Basements provide access to computer laboratories (with printers and scanners), laundry rooms, television areas, kitchens, study areas, game rooms and exercise rooms. The reception desks offer many services and a variety of equipment including tools, vacuum cleaners; cooking equipment, DVDs, and sports equipment.

More information, including current rates is available at the University Housing website. Additional questions may be directed to the University Housing office at 715/232-1121, or by e-mail at [housing@uwstout.edu](mailto:housing@uwstout.edu).

Students who live on campus during the academic year choose a dining service plan from a variety of options. For more information, go to University Dining Services.

## Learning and Information Technology Services

Learning and Information Technology (LIT) is a support organization dedicated to providing efficient and effective state-of-the-art learning and information technology solutions and services to students, faculty, and staff for instruction, administration, and public service in support of the University's mission. Learn more about services available to students at the Learning and Information Technology Services website.

## Student Services

Student Services is a network of programs that provide services designed to meet student needs in academic success, career development and personal skill building. Contact the Office of the Dean of Students at 130 Bowman Hall or call 715/232-1181 for more information about any of these programs.

### Advisement Center

The Advisement Center is home to UW-Stout's First-Year Advisers and the following services: first-year advising, career exploration, change of major, exit interviews, new student orientation and registration, academic skills program, and the Youth Options Program.

In addition, the Advisement Center serves the undergraduate student population as a drop-in center for general academic assistance and career information. The center is open from 8:00 a.m. to 4:30 p.m., Monday through Friday. Appointments are appreciated, however walk-ins are welcome. For more information, call 715/232-1465, or visit 11 Bowman Hall, or go to the Advisement Center website.

- **First-Year Advising** As part of UW-Stout's extended orientation for new students; first-year students are assigned an adviser who will work closely with them throughout their first year at the university. This adviser provides guidance in academic, career and transition issues that typically occur during the first year of college. Freshmen will meet with their first-year advisers multiple times during the school year; receive timely e-mails reminding them of important dates for adding/dropping classes, fee payments, Advisement Day, and Evaluation Week and learn about campus resources and policies. Freshmen transition to their academic program adviser at spring semester's Advisement Day.
- **Career Exploration Services** offers a collection of computerized and printed information on jobs, career outlook data, college catalogs and graduate school information. Students may take interest and personality assessments and review them with a counselor to assist in deciding career direction and goals. For more information, call 715/232-5306 or go to the Career Exploration Services website.
- **New Student Orientation/Registration** aids students in their transition to the university and initial course registration. Programming includes advisement, course registration, academic expectations and an introduction to university resources, services, social and cultural opportunities. Parents are welcome and encouraged to attend parts of the registration/orientation programs. Each classification of new students (first time freshmen, transfer student, and Youth Options participant) has different programming options, dates and requirements. For more information, call 715/232-1465 or visit 11 Bowman Hall or go to the New Student Orientation/Registration website.

## Career Services

Career Services offers a variety of career search services to students and alumni. Counselors can help you plan for future employment opportunities. Services include online resources, career conferences, campus recruitment, teacher fairs, workshops and one-on-one counseling. Employment assistance to graduates and co-ops are a major emphasis at UW-Stout. The office maintains statistical reports on the employment of graduates and cooperative education employment activities.

More information is available from the Career Services Office, 103 Administration Building, 715/232-1601 or on the Career Services website.

## **The Counseling Center**

The Counseling Center offers group, individual and couple's counseling; educational programs and workshops; self-help resources; and consultation to the campus community-with a mission of contributing to the intellectual, emotional and relational health and development of students. Counseling services are free of charge to students and all counseling records are kept strictly confidential and are not part of the university records.

For more information call 715/232-2468, visit the Counseling Center website, or stop by our office in 410 Bowman Hall.

Additional services include testing and Alcohol and Other Drug Education Program.

- **Testing Services** Educational testing services are also offered by the center, including UW Placement tests, CLEP exams, and others. Learn more online at the Testing Services website.
- **Alcohol and Other Drug Education Program (AODEP)** The AODEP helps people develop mature, responsible and legal alcohol and other drug behaviors and attitudes. The AODEP provides a variety of services related to alcohol and other drug prevention, intervention, assessment and counseling. Learn more online at the Alcohol and Other Drug Information website.

## **Dean of Students Office**

Students who have questions about or concerns about policies, including academic and non-academic misconduct policies, student rights and responsibilities, support services, and adjusting to life at UW-Stout are invited to bring their questions and concerns to the Dean of Students Office. This office serves an ombudsman role, assisting students to find solutions to their concerns. Appeals of academic dismissal, requests for medical withdrawals and reports of extended absences should be initiated in this office, as well. Parents, staff and faculty, and members of the public are invited to contact this office for information on campus policies, and to report student issues or incidents they feel should be brought to the attention of the campus.

For more information visit 130 Bowman Hall or online at Dean of Students Office website.

## **Disability Services**

UW-Stout recognizes disability as an aspect of diversity. The Disability Services office serves as a resource to students, faculty, and staff and provides support to the entire campus. The mission of the office is to ensure that students with disabilities have equal access and opportunities to all programs and services on campus. If students with disabilities experience, or anticipate experiencing, barriers in the learning environment, they are encouraged to contact the Disability Services office. All means of access/accommodations are individualized.

For more information, call 715/232-2995, visit 206 Bowman Hall or go to the Disability Services website.

## **Educational Talent Search**

Educational Talent Search is a federally funded TRIO program. The program serves young people in grades 6-12, who may be from first generation and/or low-income families, to finish high school, enter post-secondary education and successfully graduate. In addition to counseling, participants receive information about college admission requirements, scholarships and various student financial aid programs. This early intervention program helps young people to better understand their educational opportunities and options.

For more information, call 715/232-5010 or visit 400 Bowman Hall or go to the Educational Talent Search website.

## **Multicultural Student Services**

Multicultural Student Services (MSS) provides intercultural and leadership development, academic, career and financial support and coordinates living and learning communities for African American, American Indian, Asian and Latino students. Multicultural Student Services is a great place to connect with others that value diversity and collaborate with multicultural student organizations.

For more information, call 715/232-1381, visit 217 Bowman Hall or the Multicultural Student Services website.

### **Student Support Services - ASPIRE**

ASPIRE is a federally funded TRIO academic support program that contributes to student retention, graduation, and good academic standing. Eligible students are first generation college students, students with limited income or students with documented disabilities.

ASPIRE programming provides academic advising and coaching, individualized math and writing support and more for eligible students. The staff helps students monitor their academic progress and provide career counseling and other services to help students achieve their academic and college goals.

For more information, call 715/232-5180, visit 310 Bowman Hall or go to the ASPIRE website.

### **Student Health Services**

All registered UW-Stout students are eligible to receive care at the Student Health Services. The majority of the services are funded by the student health fee, which is included in the tuition and fee payment. Services offered are diagnosis and treatment of illnesses and injuries; diagnosis, medical treatment and collaborative care with counseling professionals for common mental health concerns; general, employment, travel and athletic physicals; preventative health screening; diagnosis and treatment for sexually transmitted infections; confidential HIV testing; laboratory testing; on site availability of common prescription medication and orthopedic supplies; immunizations/vaccines; tuberculin skin testing; and health education. Services are available during the academic year from 7:45 a.m. to 4:30 p.m., and during the WinTerM session from noon to 4:30 p.m., Monday-Friday. During the summer months, the clinic is closed; however, a health advice line, staffed by medical care personnel, is available.

If urgent care is needed during the hours that Student Health Services is closed, contact Red Cedar Medical Center at 715/235-9671 or Marshfield Clinic at 715/233-6400. All costs are the responsibility of the student.

Additional information about services, health insurance and other topics is available at the Student Health Services website.

### **Textbooks**

Textbooks and other required resources for your classes are available for loan at this service. Instructional Resources Service (IRS) is located on the west side, second floor, of the Robert S. Swanson Library and Learning Center. Required resources may be checked out and are due the last day of the class.

If you have any questions or need assistance, feel free to stop in or call 715/232-2492. Additional information is available at the Instructional Resources Service website.

### **Memorial Student Center**

The Memorial Student Center is a welcoming gathering place for students, faculty, staff administration, alumni and guests to gather, study, dine, play and relax. It is a place to get to know and understand one another. Since you'll spend three quarters of your time outside of the classroom, extracurricular and co-curricular activities that contribute to intellectual, professional and personal growth can be a valuable partner to academics. Our staff is dedicated to making your out of classroom experience a valuable part of your education.



The student center is conveniently located at 302 10th Avenue, a major crossroad of the campus. You are invited and encouraged to use the facility, services, programs and activities offered by the Memorial Student Center. For more information about our services, call 715/232-1431 or visit the Memorial Student Center website.

### **The Involvement and Leadership Center**

The Involvement Center, located in the Memorial Student Center, fosters a supportive environment that encourages and challenges students to become fully engaged in and enjoy campus life, to seek learning outside of the classroom and to prepare themselves as contributing citizens.

- **Student Organizations** You may choose from approximately 165 student organizations and a myriad of activities on campus, in areas as diverse as music, service, journalism, religion and politics. Student organizations help students continually develop their skills interests. A list of student organizations is online.
- **Involvement and Leadership** provides significant learning experiences for students through meaningful service and leadership activities that benefit our community. Learn more at the Involvement Center website.

### **University Recreation**

**University Recreation** is a great way for you to stay active, develop friendships and learn lifetime skills while attending UW-Stout. If you are into playing sports, rock climbing, strength training, kayaking and cardio classes, then look no further - University Recreation has it all.

You can be active in the following programs:

- **Intramural Sports** will let you exercise your competitive spirit. Join a team or create your own and challenge the rest of the university in the sport you love most. Organized leagues with tournament play and officiating allows for an exciting athletic environment.
- The **Health and Fitness Center** offers a state-of-the-art facility along with group fitness classes taught by instructors. If you need a little motivation or guidance, our knowledgeable staff of personal trainers is always available to help out. A 25-yard swimming pool is available for recreational use. This is a chance to achieve peak physical fitness.
- **Stout Adventures** will take you to the backcountry, up high on a rock face, or down a scenic waterway. Discover your sense of adventure and explore the wilderness around you. Those who enjoy climbing can take advantage of two 30-foot indoor climbing walls. Memberships are available to all students. Stout Adventures also facilitates an outdoor Adventure Challenge Course which consists of two 50-foot towers and nine low initiatives designed to challenge groups or individuals.
- **Sport Clubs** are another great way to show your competitive spirit, with up to 26 clubs to choose from. These sport clubs have been formed by individuals who are motivated by a common interest and desire to participate in a recreational activity. Many clubs compete regionally and nationally.

If you are looking for student employment, University Recreation employs 120 students yearly from intramural sports officials and lifeguards, to group fitness instructors, and adventure challenge course facilitators. Learn more at the University Recreation website or call 715/232-1392.

### **Veterans Services**

The Veteran Services office provides assistance to veterans, military service members, and the children and spouses of veterans. This office provides students with current information on military/veteran specific education benefits and processes these benefit programs. Veteran Services also manages veteran related student services programming and maintains liaison with veteran/military related government entities at the local, state, and federal levels. All students receiving veteran/military financial assistance must file the appropriate forms with this office to be officially certified to receive benefits.

For more information, visit Veterans Services, 109 Bowman Hall, 715/232-1659 or [veteranstudents@uwstout.edu](mailto:veteranstudents@uwstout.edu).

# Teacher Education

## Teacher Education

Teacher preparation programs are affiliated through the School of Education, housed in the College of Education, Health and Human Sciences. Candidates can prepare to become education professionals in technical or community college settings or in PK-12 school settings. The School of Education and its programs are accredited by the Wisconsin Department of Public Instruction and the National Council for the Accreditation of Teacher Education. The School of Education serves as a resource center for students, schools and the general public.

Information about the School of Education and specific teacher education programs, minors and other subprograms can be found online at the School of Education website.

Pre-education is the initial designation for students interested in becoming a licensed teacher in a PK-12 educational setting. The UW-Stout School of Education Assessment System is designed so that candidate progress is reviewed at various points called benchmarks.

## Certification

Licensing agencies make periodic changes in requirements that may necessitate program changes. It is the student's responsibility to make certain they have the most current information about Wisconsin requirements from their adviser or program director. Certification requirements vary by state. UW-Stout programs are designed to meet the requirements in Wisconsin only. Students contemplating teaching certifications in another state are responsible for understanding the requirements in the state for which they wish to seek a teaching license.

# Glossary of Academic Terms

### Academic Probation

A condition of attendance under which students are allowed to remain at the university with the understanding that they meet set academic standards within a set period of time. Failure to meet the standard results in dismissal from the university.

### Add and Drop

The process of changing a course schedule by dropping or adding a course during the prescribed time at the beginning of each semester.

### Adviser

Faculty or staff member who can provide information and assistance on academic concerns.

### Audit

Students register and attend class, but do not take examinations. No credit hours are earned, and the cost of the class is less than regular tuition. "AU" will appear on the grade record.

### Bachelor's Degree

The degree received after completing a specific program of undergraduate study and fulfilling all graduation requirements.

### Certification

A recognition of professional achievement bestowed by an outside organization.

### Class Standing

A measurement of achievement based on the number of credit hours earned. Students with 90 or more credits are seniors. Juniors have 60 or more credits, and sophomores have at least 30 credits.

**College**

An administrative division of the university housing academic departments, degree programs and other administrative units. At UW-Stout these are: Arts, Humanities and Social Sciences; Education, Health and Human Sciences; Management; and Science, Technology, Engineering, and Mathematics.

**College Parallel Program**

A program of study offered at Wisconsin Technical Colleges and UW System Colleges in which the courses meet the requirements and standards of courses offered at the university.

**Concentration**

A component within a degree program that examines a selected area of the student's chosen professional field in greater detail. A concentration may be part of the university's planned offerings or designed by the student.

**Cooperative Education**

A learning approach that integrates college studies with working experiences in industry, business, government and public service. Under the plan, students leave campus for three to six months for the rigors and responsibilities of actual employment situations. The objective is to offer an additional option for learning and to give students a realistic education.

**Credit Hour**

UW-Stout defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates: [1] At least 750 minutes of classroom or direct faculty instruction and a minimum of 1,500 minutes of out-of-class student work for one semester credit hour, or the equivalent amount of work over a different amount of time (e.g. compressed courses); or [2] At least an equivalent amount of work as required in part one [1] of this definition for other academic activities as established by UW-Stout, including distance education, online, hybrid, or other indirect faculty instruction, laboratory work, internships, co-op experiences, studio work, and other academic work leading to the award of credit hours. This definition of the semester credit hour applies to all academic credit bearing activities at all levels (graduate and undergraduate).

**Credit Load**

The number of credits a student registers for during a semester.

**Degree Audit**

A report that indicates the students' progress in meeting all of the requirements for a specific degree program.

**Degree Program**

A planned program of study leading to a bachelor's degree.

**Degree-Seeking Student**

A student who has been admitted to a degree program and is seeking a bachelor's or master's degree.

**Disadvantaged**

Deprived of basic social rights and security through poverty, discrimination, or other unfavorable circumstances.

**Educationally Disadvantaged**

Deprived of a socially adequate education through poverty, discrimination, or other unfavorable circumstances.

**Elective**

A course taken at the choice of the student. If the electives are in the general education component of a degree program, they must be general education courses.

**Emphasis**

A designated group of courses within a degree program that affords increased exposure to a specific area in the student's chosen professional field.

**Full Time Student**

An undergraduate student who enrolls for at least 12 credits during the fall, spring, or summer terms.

**General Education Program**

The General Education Program provides the core of what it means to be a well-educated university graduate. The goal is to promote human excellence through a broad foundation of skills and knowledge required to realize a meaningful personal, professional, and civic life. The General Education Program is intended to enable students to contribute to and live responsibly in a diverse, interconnected, and technologically sophisticated global community.

In accordance with the General Education Program, general education courses should be accessible to a broad audience and should further the goal of providing a well-rounded education regardless of career aspirations or program of study.

**Good Standing**

Maintaining an academic record that meets UW-Stout's requirements; eligible to continue at or return to the university, or to transfer to another institution.

**Grade Point**

The numerical value given to letter grades, based on an "A" receiving four points, a "B" three points, and so on.

**Grade Point Average (GPA)**

The numerical value assigned to a student's scholastic average, computed by dividing the total grade points by the total credit hours attempted.

**Grant**

Financial assistance that does not have to be repaid.

**Hold**

A barrier placed on a student's ability to register for classes as a result of unpaid monetary obligation or other action by the university.

**Incomplete**

The grade assigned only if a student is temporarily unable to complete course requirements because of unusual circumstances.

**Independent Study**

A course of study designed by a student and undertaken outside the classroom, under the supervision of one or more faculty.

**Interdisciplinary**

Drawing on two or more disciplines in a single course or program.

**Internship**

Work in a company or agency related to a student's degree program and career plans, usually for academic credit and often also for payment.

**Major**

A planned program of study leading to a bachelor's degree. Term is often used interchangeably with degree program.

**Major studies**

A component within a degree program that provides fundamental education for a particular career discipline.

**Minor**

A sequence of related courses consisting of 15 or more semester hours of credit.

**Practicum**

Directed work experience related to a program of study.

**Prerequisite**

A course or experience that must be successfully completed before enrollment in a designated course.

**Professional Development Certificate**

An alternative academic credential for individuals seeking to obtain new knowledge and skills or to update their knowledge and skills in a specific area.

**Professional Electives**

Required credits that are not prescribed by the program by designation of a specific course, but that are professional and specific in their content as they pertain to the major.

**Program Director**

The program director is responsible, with the advisement of the program committee, for the total curriculum of the major program and aids students in meeting all requirements for that program.

**Racial and Ethnic Studies**

A university requirement that prepares students for being engaged citizens in a highly diverse society and to come to appreciate, understand, value and respond respectfully to cultural diversity. Through the study of U.S. cultures other than those from a European origin, we hope to discourage racism and thus reduce its effects.

**Readmission**

An appeal procedure for students who have been dismissed or suspended, administered by the Dean of Students.

**Re-Entry**

An enrollment procedure followed by students who were previously enrolled in good standing at UW-Stout but whose attendance was interrupted for two or more consecutive semesters.

**Registration**

The process of enrolling in and paying for courses each semester.

**Selectives**

A group of courses from which a student must choose a prescribed number of credits to meet a program requirement.

**Semester**

A unit of time, generally 16 weeks long, in the academic calendar.

**Specialization**

A specialization is a program of study, with carefully constructed learning experiences, defined outcomes, and specified evaluation procedures. Students may enroll in the specialization as a stand-alone program or in addition to their undergraduate or graduate major.

**Suspension**

To be excluded from the university as a penalty for failure to meet academic or behavioral standards.

**Teaching Major/Minor**

A state-approved program for teacher certification for teaching at the secondary and/or elementary level.

**Transcript**

A copy of a student's permanent academic record.

**Transfer Credit**

Academic credit earned at another accredited institution and accepted toward a UW-Stout degree.

**Tuition**

The amount of money that must be paid for a course.

## **Academic Programs**

## Major

### Apparel Design and Development, B.S.

[Go to program website](#)

#### Introduction

The Apparel Design and Development program prepares students for the creative and technical global sewn products industry. Students will experience hands-on skill development in all ready-to-wear categories including sportswear, knitwear, safety & technical products and special occasion.

The program offers coursework in garment construction, pattern development, sketching, design, critical thinking, quality analysis, production processes, color and print development and computer aided design and manufacturing technologies. Semester-long study abroad opportunities are also available to students at London College of Fashion, AIU London and Lorenzo De Medici in Florence Italy.

#### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Core	56 credits
Minor/Specialization	24 credits

#### Program Requirements

##### General Education

##### **40 credits required**

##### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I

- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

- MATH-120 Introductory College Mathematics I
- STAT-130 Elementary Statistics

## Additional Course:

*Choose one natural science course with a lab.*

## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Professional Core

### **56 credits required**

## Major Studies: Foundation Level (27 credits)

- APRL-134 Global Fashion Industry
- APRL-166 Apparel Construction I
- APRL-167 Textiles I: Theory, Fibers and Structures
- APRL-180 Pattern Development
- APRL-211 History of Fashion-19th Century to Present
- APRL-225 Target Market Research and Line Development

- APRL-250 Textiles II: Evaluation
- APRL-272 Quality Analysis of Sewn Products
- APRL-286 Apparel Construction II: Cut and Sewn Knits

### Major Studies: Apprentice Level (17 credits)

- APRL-290 Specifications and Fit Development
- APRL-373 Advanced Pattern Development
- APRL-390 CAD for Apparel Images
- APRL-393 Garment Engineering/Production
- APRL-398 Field Experience *or*
- APRL-449 Cooperative Education Experience
- APRL-398 Field Experience *or*
- APRL-449 Cooperative Education Experience

### Major Studies: Designer Level (12 credits)

- APRL-454 Knit Design, Fabrication and Technology
- APRL-464 Functional Design and Development
- APRL-482 Studio I: Brand Development
- APRL-485 Studio II: Collection Development

### Minor/Specialization

#### **24 credits required**

*Select from approved list of minors and specializations:*

- *Applied Foreign Language*
- *Applied Photography*
- *Art*
- *Business Administration*
- *Color*
- *Health and Fitness*
- *International Studies*
- *Journalism*
- *Materials*
- *Retailing*
- *Supply Chain Management*
- *Sustainable Design*
- *Web Technology*

### **Applied Mathematics and Computer Science, B.S.**



Go to program website

## Introduction

The role of mathematics in our highly scientific-technological society is basic and essential. Mathematical thought and modeling are valued tools in our sophisticated industrial community. The application of mathematics to industry and business to meet society's need is increasing. This growth and demand continues to create a need for graduates with training in Applied Mathematics and Computer Science.

The Applied Mathematics and Computer Science program prepares graduates for careers in a variety of fields by providing a foundation in mathematics, computer science, and statistics, complemented with additional courses specified by the selected concentration. Students may choose a concentration in Actuarial Science, Business Management, Information Assurance and Cyber Security, Interdisciplinary, Software Development, and Mathematics Education, or students may tailor their coursework to provide knowledge that will prepare them for a career path of their choice.

Students will enhance their studies and gain significant hands on experience through a capstone course or cooperative education experience. On campus, there are also opportunities in undergraduate research, tutoring, and other technical openings to enrich the educational experience.

In addition to fulfilling the university's basic admissions requirements, Applied Mathematics and Computer Science applicants must also graduate in the top 50 percent of their class, or for high schools that do not rank, have a cumulative grade point average of at least 3.00 on a 4.0 scale and have a minimum ACT composite score of 22 (*SAT Math 510*).

In fulfilling the necessary competencies for a degree, a student may complete the requirements for a minor in Business Administration, Economics, or Technical Writing. It is the student's responsibility to obtain approval for the minor from the department offering it.

## General Requirements Bachelor of Science Degree

Total for Graduation	120 credits
General Education	43-44 credits
Major Studies	76-77 credits

## Program Requirements

### General Education

#### 43-44 credits

*Actuarial Science; Business Management; Information Assurance and Cyber Security; Interdisciplinary; and Software Development concentrations*

### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I

- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (11-12 credits)

- MATH-153 Calculus I *or*
- MATH-156 Calculus and Analytic Geometry I
- MATH-157 Calculus and Analytic Geometry II
- XXX-XXX *Any lab course in this area (2.00-5.00 cr.)*

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

- ECON-210 Principles of Economics I  
(*Actuarial Science and Business Management concentrations*)

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

- ICT-215 Cybertechnology Ethics  
(*Information Assurance and Cyber Security, and Software Development concentrations*)

### Selectives (4 credits)

- CS-144 Computer Science I

### Major Studies - Actuarial Science Concentration

## **77 credits**

*(\* = Minimum grade of "C" required)*

### **Mathematics/Statistics Foundation (30 credits)**

- MATH-158 Calculus III
- MATH-180 Foundations of the Language of Mathematics
- MATH-255 Differential Equations
- MATH-275 Linear Algebra
- MATH-450 Real Analysis I
- MSCS-449 Cooperative Education Experience
- STAT-331 Probability and Mathematical Statistics I
- STAT-332 Probability and Mathematical Statistics II
- STAT-440 Advanced Linear Modeling-Regression and Time Series Analysis

### **Related Fields (17 credits)**

- CS-145 Computer Science II \*
- CS-244 Data Structures \*
- ECON-215 Principles of Economics II
- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing
- MSCS-446 Numerical Analysis I

### **Selective Courses (30 credits)**

*Remaining courses are chosen from a list of actuarial science selectives provided by the program director.*

### **Professional Investigation/Exposure**

*Students must attend at least one professional event per semester for two years. See adviser.*

## **Major Studies - Business Management Concentration**

### **77 credits**

*(\* = Minimum grade of "C" required)*

### **Mathematics, Statistics and Computer Science Foundation (35 credits)**

- CS-145 Computer Science II \*
- CS-244 Data Structures \*
- MATH-158 Calculus III

- MATH-180 Foundations of the Language of Mathematics
- MATH-275 Linear Algebra
- MATH-450 Real Analysis I
- MSCS-446 Numerical Analysis I
- MSCS-449 Cooperative Education Experience
- STAT-331 Probability and Mathematical Statistics I
- STAT-332 Probability and Mathematical Statistics II

## Business and Related Courses (21 credits)

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUACT-340 Business Finance (3.00 cr.)
- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- ECON-215 Principles of Economics II
- ENGL-320 Business Writing
- ENGL-415 Technical Writing

## Selective Courses (21 credits)

*Remaining courses are chosen from a list of business management selectives provided by the program director.*

## Professional Investigation/Exposure

*Students must attend at least one professional event per semester for two years. See adviser.*

## Major Studies - Information Assurance and Cyber Security Concentration

**77 credits**

*(\* = Minimum grade of "C" required)*

### Computer Science/Network Foundation (35 credits)

- CS-145 Computer Science II \*
- CS-244 Data Structures \*
- CS-248 Web and Internet Programming
- CS-442 Systems Programming
- CS-443 Database Systems Manipulation and Design
- CS-480 Introduction to Computer Security
- ITM-133 Networking Fundamentals I
- ITM-134 Networking Fundamentals II
- ITM-383 Introduction to Network Security
- MSCS-449 Cooperative Education Experience

## Mathematics and Statistics (25 or 28 credits)

- MATH-158 Calculus III
- MATH-180 Foundations of the Language of Mathematics
- MATH-275 Linear Algebra
- MSCS-380 Cryptography
- MATH-450 Real Analysis I
- STAT-330 Probability and Statistics for Engineering and the Sciences *or*
- STAT-331 Probability and Mathematical Statistics I *and*
- STAT-332 Probability and Mathematical Statistics II

## Other Required Credits (14 or 17 credits)

- ENGL-415 Technical Writing

## Additional Courses:

*Remaining courses are chosen from a list of information assurance and cyber security selectives provided by the program director.*

## Professional Investigation/Exposure

*Students must attend at least one professional event per semester for two years. See adviser.*

## Major Studies - Interdisciplinary Concentration

### 77 credits

(\* = Minimum grade of "C" required)

## Mathematics, Statistics and Computer Science Foundation (32 credits)

- CS-145 Computer Science II \*
- CS-244 Data Structures \*
- MATH-158 Calculus III
- MATH-180 Foundations of the Language of Mathematics
- MATH-275 Linear Algebra
- MATH-450 Real Analysis I
- MSCS-449 Cooperative Education Experience
- STAT-331 Probability and Mathematical Statistics I
- STAT-332 Probability and Mathematical Statistics II

## Selective Courses (9 credits)

*Remaining courses are chosen from a list of selectives provided by the program director.*

## Approved Related Field (36 credits)

*The proposed program plan must be approved by the program director at least four semesters prior to graduation. The plan must indicate career path and courses to support that career. The plan may include a minor or a second major.*

## Professional Investigation/Exposure

*Students must attend at least one professional event per semester for two years. See adviser.*

## Major Studies - Software Development Concentration

**77 credits**

(\* = Minimum grade of "C" required)

### Computer Science Foundation (29 credits)

- CS-145 Computer Science II \*
- CS-244 Data Structures \*
- CS-354 Algorithms and Artificial Intelligence
- CS-442 Systems Programming
- CS-443 Database Systems Manipulation and Design
- CS-448 Software Engineering
- CS-458 Advanced Software Engineering
- MSCS-449 Cooperative Education Experience

### Mathematics and Statistics (22 or 25 credits)

- MATH-158 Calculus III
- MATH-180 Foundations of the Language of Mathematics
- MATH-275 Linear Algebra
- MATH-450 Real Analysis I
- MSCS-446 Numerical Analysis I
  
- STAT-330 Probability and Statistics for Engineering and the Sciences *or*
- STAT-331 Probability and Mathematical Statistics I *and*
- STAT-332 Probability and Mathematical Statistics II

### Selective Courses (23 or 26 credits)

- ENGL-415 Technical Writing

Additional Courses:

*Remaining courses are chosen from a list of software development selectives provided by the program director.*

## Professional Investigation/Exposure

*Students must attend at least one professional event per semester for two years. See adviser.*

## Program Requirement for the Mathematics Education Concentration

Total Credits to Graduation	120 credits
General Education	44 credits
Major Studies	76 credits

### General Education

#### **44 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (12 credits)

- MATH-153 Calculus I *or*
- MATH-156 Calculus and Analytic Geometry I
- MATH-157 Calculus and Analytic Geometry II
- XXX-XXX *Physical Science with a lab* (2.00-5.00 cr.)

#### Arts and Humanities (6 credits)

- LIT-XXX *Any Literature* (3.00 cr.)
- XXX-XXX *One course from Creative/Performing Arts* (1.00-3.00 cr.)
- XXX-XXX *Additional course as needed* (0.00-2.00 cr.)

#### Social and Behavioral Sciences (6 credits)

- ANTH-220 Cultural Anthropology
- PSYC-110 General Psychology

### Contemporary Issues (4 credits)

- BIO-111 Science, the Environment and Sustainability

### Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

### Selectives (4 credits)

- CS-144 Computer Science I

## Major Studies

### **76 credits required**

*(\* = Minimum grade of "C" required)*

### Mathematics, Computer Science and Statistics Foundation (36 credits)

- MATH-158 Calculus III
- MATH-180 Foundations of the Language of Mathematics
- MATH-275 Linear Algebra
- MATH-262 Modern Geometry
- MATH-450 Real Analysis I
- MSCS-280 Graph Theory with Applications in Computer Science
- CS-145 Computer Science II
- CS-244 Data Structures
- STAT-331 Probability and Mathematical Statistics I
- STAT-332 Probability and Mathematical Statistics II

### Education (40 credits)

- EDUC-303 Educational Psychology
- EDUC-326 Foundations of Education
- EDUC-415 Classroom Management
- RDGED-382 Content Area Reading
- MATHED-365 Mathematics Education Methods
- MATHED-409 Mathematics Student Teaching
- SPED-430 Inclusion of Students with Exceptional Needs



- STMED-101 Introduction to Math and Science Education
- STMED-185 Pre-Student Teaching
- STMED-260 Curriculum Methods & Assessment for Science & Technology
- STMED-360 Pre-Student Teaching in Science Technology and Math Education
- STMED-401 Capstone: Math and Science Education
- XXX-XXX *Selective to meet 120-credit requirement* (0.00-1.00 cr.)

## Professional Investigation/Exposure

*Students must attend at least one professional event per semester for two years.*

## Applied Science, B.S.

Go to program website

### Introduction

The Applied Science program offers a unique educational experience for students to learn science by doing science. The program emphasizes flexibility through a broad scientific base along with experience through a chosen career emphasis. In a world of new products and processes, the program also fosters the creativity needed to contribute to new scientific advances. Our program prepares graduates for a variety of expanding careers in biotechnology, molecular biology, biochemistry, nanotechnology, health sciences and materials. The strong academic content of the Applied Science program will also prepare graduates for entry into a variety of professional (*such as chiropractic, dental, medical, optometry, pharmacy, physical therapy or veterinary*) and graduate schools.

The curriculum is based on a core of chemistry, physics, biology and mathematics. Students will explore cutting edge topics in materials science, nanotechnology, molecular biology and biochemistry in addition to the many facets of applied science, including technical writing, data analysis, interpersonal communication and experimental design. In the Interdisciplinary Science concentration students get a minor expanding their knowledge base to contribute to industry needs from a variety of aspects including management, marketing, quality control, etc.

In addition to working with instructors from a broad range of fields, students gain significant hands-on experience through a field or cooperative education experience. This versatility offers the qualities that employers are looking for in today's college graduates - interpersonal and problem solving skills, high energy level and good judgment.

Our graduates are able to enter a myriad of occupations and career paths after graduation. Some of our graduates have chosen to enter the work force directly by becoming scientific sales representatives or laboratory technicians. Many of our graduates have continued with their passion in science and have chosen graduates schools in fields ranging from marine microbiology to bio-nano chemistry, while other graduates have entered health professions in pharmacy, physical therapy, dentistry and chiropractic, to name just a few.

In addition to fulfilling the university's basic admission requirements, Applied Science applicants must have an ACT math score of at least 22 (*SAT math 510*) and either rank in the upper 40 percent of their high school class (*or GPA of 3.0*), or have a composite ACT score of 22. Nontraditional or transfer student admission will be based on current admission standards with guidance from the program director.

## General Requirements

### Bachelor of Science Degree

Total for Graduation	120 credits
General Education	40-42 credits
Major Studies	78-80 credits

## Program Requirements

### General Education

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (13-15 credits)

- CHEM-135 College Chemistry I  
(*Interdisciplinary and Biochemistry and Molecular Biology concentrations only*)
- CHEM-136 College Chemistry II  
(*Interdisciplinary and Biochemistry and Molecular Biology concentrations only*)
- MATH-153 Calculus I *or*
- MATH-156 Calculus and Analytic Geometry I
- MATH-154 Calculus II *or*
- MATH-157 Calculus and Analytic Geometry II  
(*Materials and Nanoscience Concentration only*)

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be from the list of approved social responsibility and ethical reasoning courses.*

## Program Requirements for the Interdisciplinary Concentration

### Major Studies

**80 credits required**

#### Required Courses (40-42 credits)

- APSC-101 Applied Science Profession I
- APSC-349 Cooperative Education Experience *or*
- APSC-398 Field Experience in Applied Science *or*
- APSC-449 Cooperative Education Experience
- APSC-401 Applied Science Profession II
- BIO-135 Organismal Biology
- BIO-136 College Molecular Cell Biology I
- BIO-234 Physiology and Anatomy *and*
- BIO-235 Molecular Cell Biology II *or*
- CHEM-331 Quantitative Analysis *and*
- CHEM-335 Instrumental Methods of Analysis
- BIO-386 Introduction to Biostatistical Analysis *or*
- STAT-320 Statistical Methods *or*
- STAT-330 Probability and Statistics for Engineering and the Sciences
- CHEM-201 Organic Chemistry I
- ENGL-410 Scientific Communication
- PHYS-241 College Physics I *or*
- PHYS-281 University Physics I
- PHYS-242 College Physics II *or*
- PHYS-282 University Physics II

## Electives (14-21 credits)

*Choose any 200 level or higher science-related courses approved by your program director to fulfill the 120 credit graduation requirement.*

## Minor or Second Major (18-24 credits)

*Choose a minor that is not Chemistry, Biology, or Physics. Students should work with a minor adviser to complete requirements. In lieu of a minor, students may apply credits from a completed second major. Students must work with both program directors to meet requirements for each major and recognize that completion of two majors will exceed 120 credits.*

## Program Requirements for the Biochemistry and Molecular Biology Concentration

### Major Studies

**80 credits**

### Required Courses (57-61 credits)

- APSC-101 Applied Science Profession I
- APSC-349 Cooperative Education Experience *or*
- APSC-398 Field Experience in Applied Science *or*
- APSC-449 Cooperative Education Experience
- APSC-401 Applied Science Profession II
- BIO-135 Organismal Biology
- BIO-136 College Molecular Cell Biology I
- BIO-235 Molecular Cell Biology II
- BIO-370 Biotechnology
- BIO-386 Introduction to Biostatistical Analysis *or*
- STAT-320 Statistical Methods *or*
- STAT-330 Probability and Statistics for Engineering and the Sciences
- BIO-400 Special Topics in Biotechnology
- BIO-470 Advanced Biotechnology
- BIO-489 Advanced Biology Experience
- CHEM-201 Organic Chemistry I
- CHEM-204 Organic Chemistry II Lecture
- CHEM-206 Organic Chemistry II Laboratory
- CHEM-311 Biochemistry
- CHEM-331 Quantitative Analysis
- CHEM-412 Advanced Biochemistry
- ENGL-410 Scientific Communication

- PHYS-241 College Physics I *or*
- PHYS-281 University Physics I
- PHYS-242 College Physics II *or*
- PHYS-282 University Physics II

### Elective Courses (14-19 credits)

*Choose any 200 level or higher biology, chemistry or physics courses approved by your adviser to fulfill the 120 credit graduation requirement.*

## Program Requirements for the Materials and Nanoscience Concentration

### Major Studies

**80 credits required**

### Required Courses (57 credits)

- APSC-101 Applied Science Profession I
- APSC-349 Cooperative Education Experience *or*
- APSC-398 Field Experience in Applied Science *or*
- APSC-449 Cooperative Education Experience
- APSC-401 Applied Science Profession II
- CHEM-136 College Chemistry II
- CHEM-301 Physical Chemistry Lecture
- CHEM-303 Physical Chemistry Laboratory
- CHEM-331 Quantitative Analysis
- CHEM-341 Chemistry of Materials
- ENGL-410 Scientific Communication
- MATH-250 Differential Equations with Linear Algebra
- NANO-230 Characterization Methods of Nanomaterials
- NANO-301 Nanostructures
- NANO-401 Nanotechnology Applications
- PHYS-281 University Physics I
- PHYS-282 University Physics II
- PHYS-283 Modern Physics
- PHYS-327 Solid State Physics
- STAT-330 Probability and Statistics for Engineering and the Sciences

### Research Requirement

Choose one of the following:

- BIO-489 Advanced Biology Experience *or*
- CHEM-489 Advanced Chemistry Experience *or*
- PHYS-489 Advanced Physics Experience

## Technical Emphasis Requirement (23-25 credits)

Choose an area of technical emphasis from the following:

### Emphasis in Material Physics (23-25 credits)

- CEE-205 Circuit Analysis and Design
- MFGT-150 Introduction to Engineering Materials
- PHYS-222 Thermodynamics and Renewable Energy *or*
- MFGE-275 Thermodynamics & Heat Transfer
- PHYS-335 Applied Optics and Photonics
- PHYS-383 Quantum Mechanics
- PHYS-489 Advanced Physics Experience

*(\* Students in the materials physics emphasis area need 3 credits in advanced experiences that includes at least 1 credit in PHYS-489. Consult with your academic advisor for more information.)*

Choose enough credits from the list below to fulfill the 120 credit requirement (6-8 credits)

- CEE-215 Electronics
- CEE-235 Signals and Systems
- CHEM-325 Chemistry of Polymers
- MATH-158 Calculus III
- PHYS-321 Statics and Strength of Materials
- PHYS-329 Atomic and Nuclear Physics
- RD-320 Prototype Development and Model Making

### Emphasis in Nanobiotechnology (24 credits)

- BIO-136 College Molecular Cell Biology I
- BIO-235 Molecular Cell Biology II
- BIO-370 Biotechnology *or*
- CHEM-335 Instrumental Methods of Analysis
- CHEM-201 Organic Chemistry I
- CHEM-311 Biochemistry

Additional Courses:

*Choose 4-5 credits of any BIO-3XX, BIO-4XX, CHEM-3XX or CHEM-4XX, at least one course with lab(s).*

### Emphasis in Entrepreneurship (24 credits)

- BUACT-206 Introduction to Financial Accounting
- BUMKG-330 Principles of Marketing
- BUMKG-334 Professional Selling and Market Development
- BUMGT-304 Principles of Management
- BUMGT-480 Entrepreneurship: Small Business Planning
- SUST-315 Sustainable Engineering
- SUST-425 Sustainable Design & Development Capstone
- SUST-432 Global Sustainability Experience in Design & Manufacturing

## Applied Social Science, B.S.

Go to program website

### Introduction

The Applied Social Science degree at UW-Stout is designed to provide graduates with both marketable jobs skills and the flexibility to adapt to the rapidly changing nature of U.S. society. The degree has four major emphases providing students with 1) social science theoretical perspectives, 2) a solid knowledge base in the social sciences and history, 3) the ability to apply critical thinking skills to creatively solve practical problems in the social, economic and political arenas, and 4) strong leadership and interpersonal skills in an increasingly diverse and changing workforce. Having both social science theoretical perspectives and a solid foundation in social science knowledge, students will be able to apply critical and creative thinking skills to successfully problem solve in their future employment fields. Upon completion of their Applied Social Science degree, students will have skills in data collection, evaluation and analysis, presentation, and problem solving.

The program is interdisciplinary and provides breadth of knowledge through coursework in the areas of economics, history, political science, geography, psychology, anthropology, and sociology. It offers depth of knowledge by giving students the opportunity to select a concentration in an area of social science with additional, upper-level courses. It also offers students an opportunity to enhance their broad knowledge in the social sciences through completion of a complementary applied minor or by completing additional applied coursework, in preparation for employment in areas such as environmental analysis, global studies, human resources and other services. Students must receive a minimum grade of 2.0 or "C-" in all Professional Core and Social Science Concentration courses.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	34 credits

Concentration	24 credits
Applied Area or Minor	21-24 credits

## Program Requirements

### General Education

**40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-120 Introductory College Mathematics I (*or higher*)

#### Additional Courses:

*Remaining courses must include a natural science with a lab and additional coursework as needed to reach the 10-credit requirement.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, literature, music appreciation, performing arts, and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

#### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*



## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

*34 credits*

- ANTH-220 Cultural Anthropology
- APSS-100 Introduction to Applied Social Science
- APSS-200 Applied Social Analysis I
- APSS-300 Applied Social Analysis II
- APSS-400 Applied Social Analysis III
- ECON-210 Principles of Economics I
- ECON-215 Principles of Economics II
- ENGL-247 Critical Writing
  
- GEOG-104 World Geography *or*
- GEOG-251 Introduction to Geographic Information Systems
  
- HIST-210 Modern World
- POLS-210 American Government
- SOC-110 Introductory Sociology

## Concentrations

*24 credits*

## History and Politics (24 credits)

### **Required courses:**

- HIST-120 Early United States History
- HIST-121 Modern United States History
- POLS-270 Introduction to Comparative Government
- POLS-340 International Relations

### **Additional Courses:**

- *Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.*

## Economics (24 credits)

**Required courses:**

- BUACT-206 Introduction to Financial Accounting
- ECON-410 Microeconomics
- ECON-415 Macroeconomics
- ECON-445 Public Finance *or*
- POLS-315 Public Policy (3.00 cr.) *or*
- SOC-225 Social Problems

**Additional Courses:**

- *Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.*

**Sociology/Anthropology (24 credits)****Required courses:**

- ANTH-400 Applied Anthropology
- SOC-225 Social Problems *or*
- SOC-345 Social Stratification
- SOC-250 Social Psychology
- ANTH-3XX Social Theory *or*
- SOC-3XX Social Theory

**Additional Courses:**

- *Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.*

**Applied Areas or Complementary Minor****21-24 credits**

Select an Interdisciplinary Applied Area or a complementary minor:

**Interdisciplinary Applied Areas**

- Environmental Issues and Analysis
- Global Studies

*or student-designed applied coursework with adviser approval.*

**Pre-approved Minors**

- Applied Peace Studies

- Business Administration
- Disability Services
- Environmental Issues and Analysis
- Environmental Studies
- Geographic Information Systems
- Global Studies
- Human Development and Family Studies
- Human Resource Management
- Military Leadership
- Project Management
- Quality Management
- Sustainable Design and Development
- Tourism
- Woman and Gender Studies Minor

## Art Education, B.S.

[Go to program website](#)

### Introduction

The Art Education program provides students with experience in liberal studies, art history, studio art and professional education. It is a Bachelor of Science degree program that prepares students for certification by the Department of Public Instruction for teaching art in elementary and secondary schools. An understanding of general studies, art history, the present status of art and the educational environment, with an inquisitive approach toward problem solving, will move students to a professional level. Experienced art and design faculty ensure current course content and serve as advisers for students. Pre-teaching observation, presented at the sophomore level, provides students with an early involvement in elementary and secondary schools. A required mid-program review offers students an overview of their progress. Extensive library resources and the art and design department visual resource center are significant assets. Foreign study opportunities allow students variety in cultural experiences. An optional 11 credit additional concentration in Adaptive Education is available.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

A mid-program portfolio review and a screening for continuation in the Art Education program are required for graduation. Before student teaching, students must have a minimum overall grade point average of 2.75, successfully complete the standardized content examination required by the Wisconsin Department of Public Instruction, compile a professional education portfolio and be fully admitted from pre-Art Education status to the Art Education program. Students present an exhibition of their work during one semester of their senior year. Students must achieve a minimum grade of "C" (2.0) or better in each class, achieve a 2.75 grade point average in all art, art education, art history, design, and professional education courses, and successfully complete student teaching at both primary and secondary levels before graduation.

### Program Requirements

## General Education

*40 credits required*

### Communication Skills (9 credits)

*A grade of "C" or better is required in English and speech.*

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics

### Additional Courses:

*Remaining courses must be from the areas of analytic reasoning and natural sciences; at least one natural science course with a lab is required.*

### Arts and Humanities (6 credits)

### Social and Behavioral Sciences (6 credits)

- ANTH-220 Cultural Anthropology
- PSYC-110 General Psychology

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

### Selective (3 credits)

- ART-100 Drawing I

## Major Studies

**80 credits**

### Art and Design Requirements (24 credits)

- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- ART-209 Painting I
- ART-213 Ceramics I
- ART-215 Art Metals I
- ART-217 Printmaking I
- DES-220 Introduction To 2D Digital Imaging

### Advanced Studio Selective (6 credits)

*Select courses/credits from one studio focus area.*

### Art History Requirements (12 credits)

- ART-307 Aesthetics in the Studio *or*
- ARTH-XXX *Non-Western elective* (3.00 cr)
- ARTH-223 Survey of Art--Ancient Through Medieval
- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-336 Modern Art *or*
- ARTH-337 Art Since 1950

### Professional Education Requirements (38 credits)

- ARTED-108 Introduction to Art Education
- ARTED-208 Contemporary Theory and Curricular Practices in Art Education
- ARTED-308 K-12 Art Education Theory, Methods, and Practice
- ARTED-408 Student Teaching in Art Education - Elementary
- ARTED-409 Student Teaching in Art Education - Secondary
- EDUC-303 Educational Psychology
- EDUC-326 Foundations of Education
- RDGED-382 Content Area Reading
- EDUC-415 Classroom Management
- SPED-430 Inclusion of Students with Exceptional Needs

# Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

## Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a minimum grade of 2.00 (C) in ARTED-108 Introduction to Art Education course
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

## Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

## Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Elementary School and High School.
- Receive a satisfactory student teaching assessment

## Business Administration, B.S.

Go to program website

## Introduction

The Business Administration program at UW-Stout is unique in that it blends business with technology. It has a solid foundation of general-liberal studies and covers the functional areas of marketing, manufacturing, finance, personnel, accounting and law. It also requires comprehensive courses in policies, management information systems, leadership, and the legal and ethical aspects of management. The unique aspect of requiring credits in a technical component allows a student to tap one or more of UW-Stout's technology areas such as construction, graphic arts management, information systems, logistics management, loss control, packaging, quality management, training, retail management, hospitality and tourism management, and the like to complement the business program.

Keeping pace with the demands of the ever-changing business environment, the business degree at UW-Stout has added a concentration in supply chain management. Recognizing that this is a specialized skill that is being driven by globalization, cost control and increased customer service levels and high quality requirements; the business program has reached out to give our students an opportunity to specialize in this critical area of commerce. Supply chain management encompasses all logistics management activities. Since this area of business integrates supply and demand management within and across companies, and represents approximately 70 to 80 percent of the cost structure of a typical company; it is necessary to operate an efficient supply chain in order to compete. Thus businesses have deemed this to be a critical business function and skill.

Recent graduates have obtained positions in areas of sales, retailing, production control, manufacturing supervision, purchasing, cost accounting, human resource management, restaurant management, customer service, banking and others.

## General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Preparation	8-9 credits
Major Studies	71 credits

*A grade point average of at least 2.5 for the last 64 credits earned or a grade point average of 2.5 overall for UW-Stout credits earned in program is required. At least 31 credits from the Business Core and Professional Core must be taken at UW-Stout.*

## Program Requirements

### General Education

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I

- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-123 Finite Mathematics with Applications (*or more advanced*)
- STAT-130 Elementary Statistics
- XXX-XXX *Natural sciences course (with lab)* (4.00 cr.)

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- ECON-210 Principles of Economics I

### Additional Courses:

*Remaining course(s) must be from areas including anthropology, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses, which includes technology.*

### Social Responsibility and Ethical Reasoning (3 credits)

- BUMGT-235 Management Ethics (*recommended*)

### Additional Courses:

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

### Professional Preparation

*8-9 credits required*

### Problem Solving (3 credits)



*Select one course:*

- ENGL-247 Critical Writing
- LOG-250 Critical Thinking
- LOG-301 Introduction to Logical Thinking
- RD-205 Design for Industry

## Business Writing (3 credits)

- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing

## Information Technology (2-3 credits)

*Select one course:*

- ICT-103 Information and Communication Technologies
- ICT-305 Information Systems for Enterprise
- ICT-375 Web Production and Distribution
- XXX-XXX Any *ICT or CS* course (2.00-3.00 cr.)

## Major Studies

*71 credits required*

### Business Core (28 credits)

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUFIN-340 Business Finance
- BUMGT-100 Introduction to Business Administration
- BUMGT-304 Principles of Management
- BUMIS-333 Management Information Systems - Decision Support Systems
- BUMKG-330 Principles of Marketing
- BULGL-318 Business Law I
- ECON-215 Principles of Economics II
  
- INMGT-200 Production and Operations Management *or*
- INMGT-210 Service Operations Management

### Professional Core (33 credits)

*One course is required from each of the following areas: Accounting, management operations, marketing, human resources, legal, integrated systems, international, management, practicum, applied experiential learning, and business electives. Please see adviser for current course list.*

*A minimum 2.5 grade point average is required overall or for the last 64 credits used in the Business Administration program.*

## Emphasis Area (10 credits)

*Students select a specific emphasis area to supplement the business core. There are many emphasis areas available. Students must meet with the program director to select an emphasis area and for the list of courses available in each emphasis area.*

## Requirements for the Supply Chain Management Concentration

*80 credits required*

### Professional Preparation

*8-9 credits required*

### Problem Solving (3 credits)

*Select one course:*

- ENGL-247 Critical Writing
- LOG-250 Critical Thinking
- LOG-301 Introduction to Logical Thinking
- RD-205 Design for Industry

### Business Writing (3 credits)

- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing

### Information Technology (2-3 credits)

*Select one course:*

- ICT-103 Information and Communication Technologies
- ICT-305 Information Systems for Enterprise
- ICT-375 Web Production and Distribution
- XXX-XXX Any *ICT or CS* course (2.00-3.00 cr.)

## Major Studies

**71 credits required**

### Business Core (28 credits)

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUFIN-340 Business Finance
- BUMGT-100 Introduction to Business Administration
- BUMGT-304 Principles of Management
- BUMIS-333 Management Information Systems - Decision Support Systems
- BUMKG-330 Principles of Marketing
- BULGL-318 Business Law I
- ECON-215 Principles of Economics II
- INMGT-200 Production and Operations Management *or*
- INMGT-210 Service Operations Management

### Professional Core (43-44 credits)

- BUINB-338 International Logistics
- BULGL-319 Business Law II *or*
- BULGL-401 Legal Environment of Business
- BUMGT-449 Cooperative Education Experience *or*
- BUMGT-489 Business and Industrial Internship
- BUSCM-338 Principles of Logistics
- BUSCM-437 Procurement, Sourcing and Supply Chain Management
- BUSCM-439 Seminar: Supply Chain Systems Design
- INMGT-305 Resource Planning and Materials Management
- INMGT-320 Quality Tools
- INMGT-325 Quality Management
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership *or*
- INMGT-415 Inclusivity in Leadership
- INMGT-405 Resource Planning and Materials Management Practicum
- INMGT-440 Lean Enterprise
- RC-381 Principles of Occupational Risk Control/Safety *or*
- TRHRD-360 Training Systems in Business and Industry

## Career, Technical Education and Training, B.S.

Go to program website

### Introduction

The B.S. in Career, Technical Education and Training prepares teachers for post-high school settings such as junior colleges, public and private technical colleges, and industrial training programs.

A student must obtain a minimum of 4,000 hours of appropriate work experience for provisional certification to teach career, technical and adult education courses in Wisconsin technical colleges.

Students must apply for admission to the education sequence. Candidates must hold a cumulative grade point average of at least 2.75.

**Articulation Agreement** There is an approved articulation agreement for this program with all of the Wisconsin Technical Colleges. The articulation agreement covers all Associate of Applied Art and Associate of Applied Science programs.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## **Program Requirements**

### **General Education**

**40 credits required**

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

#### **Arts and Humanities (6 credits)**

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **80 credits required**

## Technical (47 credits)

*Because each student brings different qualifications as a result of prior training and experience, the student, with the assistance of the program director, will define all 47 technical credits in terms of student and job competency needs.*

## Professional Component (33 credits)

*Minimum grade of "C" required in all professional component courses.*

- CTE-302 Principles of Career and Technical Education \*
- CTE-334 Performance Analysis
- CTE-405 Methods of Teaching Career and Technical Education \*
- CTE-438 Course Construction in Career and Technical Education \*
- CTE-440 Instructional Evaluation in Career and Technical Education \*
- EDUC-336 Multiculturalism: Issues & Perspectives \*
- EDUC-403 Educational Psychology of the Adult Learner \*
- CTE-370 Instructional Technology - Education and Training
  
- INMGT-400 Organizational Leadership *or*
- PSYC-382 Human Resource Management
  
- SCOUN-301 Introduction to Guidance \*
- TRHRD-360 Training Systems in Business and Industry
  
- CTE-408 Student Teaching in Career and Technical Education *or*
- TRHRD-389 Training Internship

Note(s):

*\* Course content is mandated for Wisconsin Technical College System certification.*

## **Computer Engineering, B.S.**

Go to program website

### **Introduction**

The Computer Engineering program at UW-Stout is ideally suited to meet the needs of regional and national industries by providing computer engineers with a strong background in both electrical engineering and computer science. Graduates of this program are equipped to work with both hardware and software aspects of computer systems.

Demand for computer engineers is strong, as computer systems of all sizes - from computer chips in cellular telephones to computercontrolled equipment in large manufacturing environments - are ubiquitous in present-day society.

UW-Stout's Computer Engineering program is a calculus-based program which progresses from solid foundations in mathematics and science through analysis and design. The program includes a strong emphasis on laboratory activities and student engineering design projects, with a particular focus on the design of hardware and software for engineering systems that utilize embedded digital processors such as microprocessors, microcontrollers, digital signal processors and personal computers.

### **General Requirements Bachelor of Science Degree**

Total for graduation	128
General Education	40
Major Studies	88

### **Program Requirements**

#### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I

- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (13 credits)

- CHEM-135 College Chemistry I
- MATH-153 Calculus I
- MATH-154 Calculus II

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Selective credits are fulfilled by analytic reasoning and natural science category.*

## Major Studies

*88 credits required*

### Mathematics and Basic Sciences (20 credits)

- MATH-270 Discrete Mathematics
- MATH-250 Differential Equations with Linear Algebra
- MECH-292 Dynamics
- PHYS-291 Statics
- PHYS-XXX Physics for Engineers (5.00 cr.)
- STAT-330 Probability and Statistics for Engineering and the Sciences

### Engineering Core (10 credits)

- CEE-205 Circuit Analysis and Design
- CEE-349 Cooperative Education Experience *or*
- CEE-449 Cooperative Education Experience
- INMGT-300 Engineering Economy
- MFGE-275 Thermodynamics & Heat Transfer

## Computer Engineering (58 credits)

- CEE-225 Digital Logic
- CEE-215 Electronics
- CEE-235 Signals and Systems
- CEE-325 Digital System Design
- CEE-335 Automatic Control Systems
- CEE-345 Microprocessor System Design
- CEE-355 Applied Electromagnetics
- CEE-405 Capstone I: Computer Engineering Design
- CEE-410 Capstone II: Computer Engineering Design
- CEE-425 Data Communications and Computer Networks
- CEE-435 Digital Signal Processing *or*
- CEE-455 Fundamentals of Wireless Communications
- CEE-445 Embedded System Design
- CS-144 Computer Science I
- CS-145 Computer Science II
- CS-244 Data Structures
- CS-442 Systems Programming

## Construction, B.S.

Go to program website

### Introduction

The Construction program is designed to prepare individuals for a variety of responsible positions in the field of construction.

Broad objectives of the program include developing fundamental knowledge of science, engineering, business, management, architecture and construction principles; applying scientific, technological and management principles to the solution of construction problems; and integrating diverse scientific and technical areas as they impact on the construction field.

### General Requirements

#### Bachelor of Science Degree



Total for graduation	120 credits
General Education	41 credits
Major Studies	79 credits

## Program Requirements

### General Education

*41 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (11 credits)

- MATH-153 Calculus I
- STAT-130 Elementary Statistics
- PHYS-241 College Physics I

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

#### Social and Behavioral Sciences (6 credits)

- ECON-201 General Economics *or*
- ECON-210 Principles of Economics I
- POLS-210 American Government

#### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **79 credits required**

## Business and Management (15 credits)

- BUACT-201 Financial-Managerial Accounting *or*
- BUACT-206 Introduction to Financial Accounting
  
- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing
  
- INMGT-300 Engineering Economy
- INMGT-400 Organizational Leadership
- PSYC-382 Human Resource Management

## Prerequisite Courses (25 credits)

- AEC-120 Construction Industry Orientation and Documents
- AEC-131 Architectural Graphics
- AEC-171 Light Construction Methods and Materials
- AEC-237 Architectural Technology
- AEC-370 Construction Estimating I
- AEC-458 Structural Systems--Wood and Steel
- BUMGT-304 Principles of Management
- PHYS-321 Statics and Strength of Materials

## Architecture, Engineering and Construction (39 credits)

- AEC-270 Heavy Construction Methods and Equipment
- AEC-273 Concrete And Masonry Technology
- AEC-352 Building Mechanical Systems
- AEC-353 Building Electrical and Control Systems
- AEC-357 Site Engineering
- AEC-449 Cooperative Education Experience

- AEC-459 Structural Systems-Concrete And Masonry
- AEC-470 Construction Estimating II
- AEC-471 Project Scheduling and Cost Control
- AEC-472 Management of Construction
- BULGL-473 Legal Aspects of Construction
- PHYS-257 Introduction to Geology and Soil Mechanics
- RC-388 Construction Safety

## Criminal Justice and Rehabilitation, B.S.

Go to program website

### Introduction

The B.S. in Criminal Justice and Rehabilitation offers a unique approach to rehabilitation. The positive change model incorporates interdisciplinary training for recognition of the underlying factors that commonly lead to unlawful behavior and development of techniques required to affect positive behavioral change. Students are able to understand the impact of disability, mental illness, and substance abuse on the involvement in unlawful behavior, and furthermore apply knowledge to focus on rehabilitation of the offender rather than punishment and incarceration. Students develop skills in oral and written communication, critical thinking, and the ability to apply ethical and legal standards in decision making. The graduate is able to integrate and apply knowledge and human relation skills in the prevention, treatment, education, and rehabilitation of offenders. The development of interpersonal and social skills and the ability to examine and analyze individual needs prepares students for successful and rewarding professional careers.

Graduates of the Criminal Justice and Rehabilitation program work in positions such as probation and parole agents, correctional treatment specialists, juvenile counselors, and diversion court officers and administrators. Research indicates an increasing future demand for all related occupations. Students are required to maintain a 2.0 GPA per university standards through their first two years, and a 2.5 GPA per program standards following their junior year (*90 credits*).

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

### Program Requirements

#### General Education

*40 credits required*

Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

## Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology
- SOC-110 Introductory Sociology

## Contemporary Issues (3 credits)

*Courses must be from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

- POLS-210 American Government

## Major Studies

*80 credits*

## Required Courses (68 credits)

- COUN-405 Introduction to Basic Counseling Skills
- HDFS-255 Lifespan Human Development

- HDFS-335 Critical Cultural Competence
- PSYC-361 Abnormal Psychology
- REHAB-101 Introduction to Rehabilitation
- REHAB-102 Community Resources
- REHAB-201 Pre Practicum in Rehabilitation
- REHAB-205 Rehabilitation Practicum
- REHAB-217 Law Enforcement Policies and Procedures
- REHAB-230 Psychosocial Aspects of Disability
- REHAB-310 Vocational Assessment Applications in Rehabilitation
- REHAB-315 Rehabilitation and Criminal Justice
- REHAB-320 Rehabilitation and Chemical Dependency
- REHAB-321 Rehabilitation of Public Offenders
- REHAB-327 Psychiatric Rehabilitation
- REHAB-333 Adolescent Substance Use and Abuse
- REHAB-401 Principles and Techniques of Caseload Management
- REHAB-410 Job Placement Processes
- REHAB-452 Group Processes in Rehabilitation Settings
- REHAB-470 Work Adjustment Services
- REHAB-480 Advanced Rehabilitation Practicum
- REHAB-488 Developing Collaborative Partnerships
- SOC-315 Criminology
- SOC-375 Sociology of Minority Groups

## Selectives (12 credits)

*Select credits from the approved list:*

- HDFS-420 Family Research and Methodology
- HDFS-456 Abuse and the Family
- HDFS-310 Family Stress, Coping and Adaptation
- PSYC-280 Forensic Psychology, Law and Ethics
- PSYC-333 Drugs and the Brain
- PSYC-370 Interpersonal Effectiveness Training
- SOC-360 Sociology of Juvenile Delinquency
- SPED-300 Introduction to Individuals with Cognitive Disabilities
- SPED-301 Learning Disabilities

## Cross-Media Graphics Management, B.S.

Go to program website

### Introduction

UW-Stout's Bachelor of Science Degree program in Cross-Media Graphics Management prepares managers and leaders for the graphic communications industry. Cross-media campaigns often include printed direct mail, email blasts, response web microsites, social media integration and may utilize mobile technology to trigger related online

content. Cross-media graphics projects are often data-driven to produce personalized content for each recipient, making it more relevant and effective. The major covers all phases of the graphics process -from design, through production and delivery of these products and services and prepares graduates for a wide variety of positions across the entire industry.

Through intensive hands-on learning experiences in a laboratory environment, the program addresses the skills and understanding necessary for students to succeed in the global media marketplace. A strong emphasis is placed on the application of theory and laboratory experience to the solution of real world problems. This program will prepare leaders with the ability to respond aggressively to the needs of the marketplace; to apply research and theory to the development of marketable media products and services using efficient processes; and to design with an awareness of the realities of the manufacturing process, cost, environment and needs of the customer and society.

Students involved in Cross-Media Graphics Management complete an industrial work experience (co-op) of three-to-eight months in the graphic communications industry to gain practical experience before they graduate and to bridge the gap from the academic classroom and laboratories of the university to the real world of work.

Well-rounded professionals are produced by a balanced curriculum made up of the following components: general education; professional management studies; graphics technology; and an elective emphasis area.

A related student professional organization complements the classroom and laboratory experiences encountered by Cross-Media Graphics Management students. The Stout Typographical Society (STS) runs a graphics production business - designing and printing projects for the campus and community. Members apply what they've learned in the classroom to real production projects and develop leadership skills by managing club operations. Each spring STS members plan a three- or four-day field trip to visit graphics companies in the region.

The Cross-Media Graphics Management program is accredited by the Accrediting Council for Collegiate Graphic Communications (ACCGC).

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120
General Education	40
Major Studies	68
Emphasis Area	12

## **Program Requirements**

### **General Education**

#### **40 credits required**

#### **Communication Skills (9 Credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I

- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- STAT-130 Elementary Statistics *or*
- STAT-320 Statistical Methods
- MATH-121 Introductory College Mathematics II
- *Remaining course must be a natural science course with a lab.*

### Arts and Humanities (6 Credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (9 Credits)

- ECON-201 General Economics *or*
- ECON-210 Principles of Economics I
- *Remaining courses must be from one or more areas including anthropology, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

### Major Studies

**68 credits required**

### Professional Management (32 credits)

- BUACT-201 Financial-Managerial Accounting
- BUACT-206 Introduction to Financial Accounting
- BUMKG-330 Principles of Marketing
- CMG-380 Cross-Media Estimating and Planning
- CMG-482 Graphics Workflow Automation
- CMG-495 Cross-Media Seminar
- CMG-449 Cooperative Education Experience
- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing
- INMGT-200 Production and Operations Management *or*
- INMGT-210 Service Operations Management
- INMGT-300 Engineering Economy *or*
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership

## Graphics Technology (36 credits)

- CMG-141 Cross-Media Graphics
- CMG-151 Graphics Software Tools
- CMG-251 Premedia Graphics Production
- CMG-266 Press Systems
- CMG-270 Postpress Operations
- CMG-351 Cross-Media Personalization
- CMG-355 ePublishing
- CMG-367 Color Management
- CMG-368 Print Optimization
- CMG-443 Cross-Media Practicum
- CMG-445 Publication Production
- ICT-375 Web Production and Distribution

## Emphasis Areas (12 credits)

*See program director for emphasis area listing.*

## **Dietetics, B.S.**

Go to program website

### **Introduction**

The Dietetics program prepares graduates for careers in clinical and administrative dietetics, community and public health nutrition, corporate wellness, and nutrition education as well as for opportunities in the food services, business and industry.



The Dietetics program is currently granted approval status by the Commission on Accreditation for Dietetics Education, of the American Dietetic Association. Completion of the Didactic Program in dietetics and the baccalaureate degree meet minimum academic requirements for ADA membership, registration eligibility and application to a dietetic internship or preprofessional practice program. The B.S. degree in Dietetics is the first of three steps toward becoming a registered dietitian (*RD*).

The dietetic student receives an education with an emphasis on the following sciences: physical and biological; behavioral and social; communication and professional. With this background, the student can move toward the community and business management of nutritional health, food service and dietetic practices that include nutrition counseling and medical nutritional therapy.

## **General Requirements Bachelor of Science Degree**

Total for graduation	120 credits
General Education	42 credits
Major Studies	78 credits

*Supervised work experience must be obtained through participation in the Field Experience program.*

*Students must attain a grade point of 2.0 or better in each of the General Education and Major Studies courses. (All transferred credits will meet this program requirement.) A 2.75 or greater grade point average is required for graduation. A minimum grade of B (3.0) is required in FN-212 Nutrition. Courses marked with an asterisk (\*) are repeatable only once, and require a cumulative grade point average of 2.50.*

## **Program Requirements**

### **General Education**

#### **42 credits required**

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (15-16 credits)**

- BIO-234 Physiology and Anatomy
- CHEM-135 College Chemistry I
- MATH-120 Introductory College Mathematics I (*or higher level course*)

- STAT-130 Elementary Statistics *or*
- STAT-320 Statistical Methods

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology

### Additional Courses:

*Choose 3 additional credits from one or more areas including anthropology, economics, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

- FN-102 Nutrition for Healthy Living *or*
- FN-244 Farm to Fork: Food Issues

### Social Responsibility and Ethical Reasoning (3 credits)

- FN-210 Issues and Ethics in Food and Nutrition

## Major Studies

**78 credits required**

### Physical and Biological Sciences (15 Credits)

- BIO-306 General Microbiology
- BIO-362 Advanced Physiology
- CHEM-201 Organic Chemistry I
- CHEM-311 Biochemistry

### Nutrition and Medical Nutrition Therapy (22 credits)

- FN-207 Medical Terminology
- FN-212 Nutrition \*
- FN-312 Nutritional Assessment

- FN-320 Advanced Nutrition
- FN-413 Maternal and Child Nutrition
- FN-415 Nutritional Issues in Gerontology
- FN-417 Medical Nutritional Therapy I
- FN-418 Medical Nutritional Therapy II

### Nutrition Education/Counseling, Communication and Community Nutrition (9 credits)

- FN-360 Nutrition Counseling: A Team Approach
- FN-380 Community Nutrition
- FN-406 Nutrition Education

### Food and Food Science (7 credits)

- FN-240 Food Science
- FN-461 Multicultural Aspects of Food & Nutrition Patterns

### Food Service Administration/Management (18 credits)

- BUMGT-304 Principles of Management
- FN-105 Food Service Sanitation
- FN-330 Institutional Menu Planning
- HT-150 Institutional Food Purchasing
- HT-324 Quantity Food Production
- HT-362 Foodservice Finance and Cost Control
- HT-450 Food Service Administration

### Career Awareness (4 credits)

- FN-101 Dietetics as a Profession
- FN-397 Field Experience
- FN-408 Preprofessional Development in Dietetics and Nutrition

### Nutrition Selective (3 credits)

- FN-355 Sports Nutrition *or*
- FN-410 Food & Nutrition Policy Regulation & Law

## Digital Marketing Technology, B.S.

The Bachelor of Science in Digital Marketing Technology is the first of its kind in this emerging field. The digitization of communications has created a fundamental switch that places technology at the heart of the process of marketing

communications. New careers are emerging, and few people possess the required educational background to thrive in this new field.

Digital marketing technology falls broadly into the field of "Informatics," which is the study of how users and systems interact to accomplish goals. The program takes a multidisciplinary approach featuring content, design, development, and distribution.

The heart of the curriculum is in areas of web technology and enterprise technology systems. Courses in software and web applications, marketing, design, production, and analytics provide a cross-disciplinary approach to prepare students for a broad range of careers where the job titles are just emerging and will be constantly changing and growing in the foreseeable future.

Businesses realize the importance of hiring people who understand both process and technology, which results in a hot job market where talent is limited, jobs are abundant, and salaries are high. This program prepares students for this job market and to grow as it changes.

## Program Requirements

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

### General Education (40 credits)

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 or
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 or
- ENGL-112 Freshman English--Honors II
- SPCOM-100 Fundamentals of Speech

#### Analytical Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics
  - STAT-130 Elementary Statistics
- Students are also required to take a 4 credit Natural Science with a lab.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

- PHOTO-204 Exploring Photography

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology, and sociology.*

## Selectives (3 credits)

*Course may be selected from the list of approved social responsibility and ethical reasoning courses.*

## Professional Technology Core (41 credits)

- DMT-1XX Intro to Digital Marketing Technology
- ICT-305 Information Systems for Enterprise
- ICT-309 Collaborative Computing
- ICT-311 Information and Communication Technologies Analytics
- ICT-375 Web Production and Distribution
- ICT-401 Information Technology Policy And Audit
- ICT-405 Enterprise Technology Seminar
- ICT-475 Dynamic Web Technologies
- ICT-485 Search Engine Optimization
- DMT-X49 Cooperative Education Experience
- CMG-141 Cross-Media Graphics
- CMG-151 Graphics Software Tools
- CS-144 Computer Science I
- CS-248 Web and Internet Programming

## Professional Management Core (21 credits)

- BUACT-206 Introduction to Financial Accounting
- BUINB-260 International Business
- BUMKG-330 Principles of Marketing
- BUMKG-350 Digital Marketing Strategy and Practice
- BUMKG-479 Marketing Research
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership

## Elective Courses (18 credits)

*Elective Courses can come from approved minors, transfer credits, or other related areas of focus with program director's approval.*

*Credits from the following UW-Stout description listings would satisfy elective credits without program director approval: BUACT, BUMGT, BUMKG, CMG, CS, ICT, INMGT, ITM, DES, MATH, PHOTO, STAT.*

*The following general education approved courses are prerequisites for other courses required in the major. They can be used to satisfy requirements in either general education or in the electives area, but not both.*

- ICT-103 Information and Communication Technologies
- CS-141 Introduction to Programming

## **Early Childhood Education, B.S.**

Go to program website

### **Introduction**

Curriculum in the Early Childhood Education program is designed to prepare resourceful, creative and competent graduates to work in settings with young children. The program emphasizes theory and practice and meets the requirements for birth through grade three teaching certification for the State of Wisconsin. Academic course work is enriched by involvement with children in early childhood settings early in the program, with observation and participation experiences in UW-Stout's Child and Family Study Center. Graduates are employed as preschool, kindergarten and primary teachers, and administrators of early childhood care centers, curriculum specialists, and resource and referral specialists within corporations and the public sector. Two concentrations, Special Education and Early Childhood-Middle Childhood, are available options and require additional coursework.

### **General Requirements Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

*Students must demonstrate proficiency in American Red Cross First Aid procedures, either by verifying current certification with their adviser, or by satisfactory completion of HLTH-340 ARC Standard First Aid and Personal Safety (adding 1 credit to the program credit total).*

*\*Required courses with a grade point of 2.0 ("C") or better. Courses in which a student earns less than the required 2.0 must be retaken and at least a 2.0 earned prior to student teaching.*

### **Program Requirements**

#### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I

- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- BIO-101 Introductory Biology
- MATH-118 Concepts of Mathematics (*or more advanced*) \*
- STAT-130 Elementary Statistics

### Arts and Humanities (6 credits)

- LIT-300 Children's Literature \*
- HIST-210 Modern World

### Social and Behavioral Sciences (6 credits)

- ANTH-220 Cultural Anthropology
- PSYC-110 General Psychology \*

### Contemporary Issues (3 credits)

- EDUC-210 Impacts of Technology on Learning

### Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

### Selectives (3 credits)

*Courses/credits may be taken from any category to meet the 40-credit requirement.*

## Major Studies

### **80 credits required**

*(Minimum grade of "C" required in all courses)*

### Early Childhood Education major studies (42 credits)

- CHEM-105 Visualizing Chemistry
- ECE-100 Introduction to Early Childhood Programs
- ECE-105 Infant/Toddler Education
- ECE-200 Expressive Curriculum for the Young Child
- ECE-205 Preschool/Kindergarten Education
- ECE-264 Child Guidance in PreSchool - Kindergarten
- ECE-305 Primary Education
- ECE-313 Language Arts and Emergent Reading: Birth-Kindergarten
- ECE-411 Early Childhood Curriculum: Mathematics
- ECE-415 Early Childhood Curriculum: Science/Social Studies
- ECE-421 Administration Of Early Childhood Programs
- ECE-426 Classroom Management in the Primary Classroom
- ECE-435 Children, Families, Schools and Communities
- HDFS-124 Human Development: Early Childhood
- RDGED-414 Literacy Instruction and Assessment in the Primary Grades

### Professional Education Core (12 credits)

- EDUC-303 Educational Psychology \*
- EDUC-326 Foundations of Education \*
- FN-102 Nutrition for Healthy Living \*
- PHYS-258 Introduction to Geology \*
- SPED-305 Early Childhood Inclusion of Students with Exceptional Needs \*

### Fine Arts Selective (2 credits)

*Select 2 credits from the approved General Education course list (Arts and Humanities areas of creative or performing arts).*

### Field Experience/Student Teaching (24 credits)

- ECE-480 Pre-Student Teaching: Infant-Preschool \*
- ECE-493 Student Teaching: Kindergarten \*
- ECE-494 Student Teaching: Primary \*

### Concentrations

#### **19 credits required**

*(Minimum grade of "C" required in all courses)*

*These optional concentrations are in addition to the 120-credit general requirements for the program.*

### Special Education (19 credits)

- SPED-310 ECSE Methods, Materials and Curriculum



- SPED-336 Early Childhood Special Education Pre-Student Teaching
- SPED-315 Early Childhood Special Education Organization and Implementation
- SPED-320 Early Childhood Special Education Assessment
- SPED-482 Student Teaching Early Childhood-Special Education

## Early Childhood-Middle Childhood Education (19 credits)

- EDUC-309 Methods, Materials, and Management for Middle Childhood Education
- EDUC-310 Middle Childhood: Curriculum and Methods for Teaching Science
- EDUC-311 Middle Childhood: Curriculum and Methods for Teaching Math
- EDUC-312 Middle Childhood: Curriculum and Methods for Social Studies
- EDUC-313 Middle Childhood: Curriculum and Methods for Teaching in the Language Arts (2.00 cr.)
- EDUC-314 Student Teaching in Elementary Grades

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL-101 or ENGL-102 or ENGL-111 and ENGL-112
- Earn a grade of at least 2.00 (C) in SPCOM-100
- Earn a minimum grade of 2.00 (C) in ECE-100 Introduction to Early Childhood Programs
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete electronic portfolio
- Receive satisfactory portfolio assessment by faculty
- Pass Content Knowledge Exam
- Receive clearance through an updated background check
- Maintain a 2.75 grade point average
- Complete a satisfactory tuberculosis (*TB*) test
- Submit copies of resume to the School of Education prior to student teaching
- Complete Application for Student Teaching form

## Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at three levels: infant/toddler/preschool, kindergarten and primary.
- Receive a satisfactory student teaching assessment

## Engineering Technology, B.S.

Go to program website

### Introduction

UW-Stout's Engineering Technology degree provides a broad background in industrial practices combined with an in-depth study in an engineering-related concentration. The program is designed to prepare graduates for industrial positions related to the engineering concentration area, with an appropriately broad background for later advancement into management positions. Typical entry-level positions include Design Engineer, Project Engineer, Plant Engineer, Process Engineer, Designer, Industrial Engineer, Production Scheduler and Applications Engineer. Students in the program develop knowledge and competencies in the concentration engineering area, materials and manufacturing methods, management/overview of the industrial organization, effective oral and written communication, and the application of physical science and mathematics principles to understand and solve technological and economic problems found in industry.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	41 credits
Professional Studies	45 credits
Concentrations	34 credits

## Program Requirements

### General Education

#### 41 credits required

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*

- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (14 credits)

- MATH-153 Calculus I
- PHYS-241 College Physics I
- PHYS-242 College Physics II

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- ECON-201 General Economics *or*
- ECON-210 Principles of Economics I
- *Remaining course must be from an area including anthropology, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Course must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Course must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Professional Studies

#### **45-46 credits required**

- BUACT-200 Financial-Managerial Accounting- Engineering Technology *or*
- BUACT-201 Financial-Managerial Accounting *or*
- BUACT-206 Introduction to Financial Accounting
- BUMKG-330 Principles of Marketing
- CHEM-135 College Chemistry I

- ELEC-204 Electricity/Electronics Fundamentals
- ELEC-341 Electrical and Mechanical Interface Devices
- ENGL-415 Technical Writing
- ET-100 Introduction to Engineering Technology
- ET-349 Cooperative Education Experience
- ET-405 Capstone I: Design Practicum
- INMGT-200 Production and Operations Management
- INMGT-400 Organizational Leadership
- MECH-290 Mechanics of Solids I
- MFGT-150 Introduction to Engineering Materials
- POWER-260 Introduction to Fluid Power
- RD-205 Design for Industry
- RC-381 Principles of Occupational Risk Control/Safety
- STAT-130 Elementary Statistics

## Concentrations

### **32-35 credits required**

*Students elect one of the following concentrations:*

### Electrical (33 credits)

#### Concentration Requirements (26 credits)

- CS-144 Computer Science I
- CS-145 Computer Science II
- ELEC-260 Electrical Circuits
- ELEC-271 Digital Logic and Switching
- ELEC-272 Solid State Electronics
- ELEC-274 Fundamentals Of Microprocessors and Microcomputer Systems
- ELEC-340 Motors and Generators
- ELEC-382 Electronic Communications
- ENGGR-112 Engineering Graphics Fundamentals

#### Concentration Selectives

*Choose 7 credits from the following:*

- CS-244 Data Structures
- ENGGR-210 Engineering Graphics Using Solid Modeling
- ENGGR-280 Engineering Graphics Applications
- MATH-154 Calculus II

#### Additional Courses:

*Courses may be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMGT, MFGT, POWER, RC, RD and SPCOM.*

#### Facilities (32 credits)

#### Concentration Requirements (29 credits)

- AEC-131 Architectural Graphics
- AEC-237 Architectural Technology
- AEC-352 Building Mechanical Systems
- AEC-353 Building Electrical and Control Systems
- INMGT-300 Engineering Economy
- INMGT-350 Facilities Planning
- INMGT-365 Project Management
- INMGT-450 Maintenance Management

Choose 6 credits from the following:

- AEC-171 Light Construction Methods and Materials *and*
- AEC-270 Heavy Construction Methods and Equipment *or*
- AEC-273 Concrete And Masonry Technology
- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes

#### Concentration Selectives

Choose 3 credits from the following:

- ENGGR-210 Engineering Graphics Using Solid Modeling
- ENGGR-280 Engineering Graphics Applications

#### Additional Courses:

*Courses may be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMGT, MFGT, POWER, RC, RD and SPCOM.*

#### Mechanical Design (32 credits)

### Concentration Requirements (28 credits)

- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling
- ENGGR-280 Engineering Graphics Applications
- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes
- MECH-291 Mechanics of Solids II
- MECH-332 Mechanical Design
  
- RD-320 Prototype Development and Model Making *or*
- RD-420 Research and Development *and*
- RD-421 Research and Development Laboratory *or*
- ET-410 Capstone II: Design Lab

### Concentration Selectives

Choose 4 credits from the following:

*Courses may be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMGT, MFGT, POWER, RC, RD and SPCOM.*

### Plastics (35 credits)

### Concentration Requirements (31 credits)

- CHEM-325 Chemistry of Polymers
- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling
- ENGGR-280 Engineering Graphics Applications
- MFGT-250 Introduction to Plastics
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes
- MFGT-303 Computer Aided Manufacturing
- MFGT-341 Injection Molding Technology
- MFGT-343 Extrusion Technology

### Concentration Selectives

Choose 4 credits from the following:

*Courses may be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMGT, MFGT, POWER, RC, RD and SPCOM.*

## Production Operations (34 credits)

### Concentration Requirements (29 credits)

- ENGGR-112 Engineering Graphics Fundamentals
- INMGT-300 Engineering Economy
- INMGT-305 Resource Planning and Materials Management
- INMGT-320 Quality Tools
  
- INMGT-350 Facilities Planning *or*
- MFGT-345 Design and Simulation of Manufacturing Systems
  
- INMGT-405 Resource Planning and Materials Management Practicum
- INMGT-440 Lean Enterprise
- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes

### Concentration Selectives

Choose 5 credits from the following:

- ENGGR-210 Engineering Graphics Using Solid Modeling
- ENGGR-280 Engineering Graphics Applications

Additional Courses:

*Courses may be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMGT, MFGT, POWER, RC, RD and SPCOM.*

## Entertainment Design, B.F.A.

Go to program website

### Introduction

The Bachelor of Fine Arts (BFA) in Entertainment Design program prepares students for careers in the fields of rapidly expanding and innovative fields of digital media. The entertainment design program encompasses disciplines related to the entertainment and media industry, particularly, animation, digital cinema, and comics and sequential art. UW-Stout graduates from this program hold jobs at a variety of animation studios, in the health care industry and at many graphic design and interactive design firms.

The entertainment design program will provide students with the specific skills needed to enter the industry, as well as, a strong foundation and breadth of core skills that will allow them to adapt to new technologies and fluctuating industry needs throughout their careers. The entertainment design program integrates and fosters a strong relationship between fine art and digital media, as well as, technical and creative writing skills. Students will acquire hands on experience using industry standard tools, software and creative techniques, as well as, be encouraged to participate in research projects, co-ops or study abroad programs.

A required mid-program portfolio review offers entertainment design students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. Entertainment Design students must present a portfolio of their work in the final semester as part of a public exhibition hosted by the School of Art and Design.

The BFA in Entertainment Design program provides a specialized education and is accredited by the National Association for Schools of Art and Design.

## **General Requirements**

### **Bachelor of Fine Arts**

Total for graduation	120 credits
General Education	40 credits
Foundation Core Requirements	35 credits
Concentration	45 credits

## **Program Requirements**

### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*



## Arts and Humanities (6 credits)

- ARTH-223 Survey of Art--Ancient Through Medieval \*
- ENGL-245 Creative Writing \* *or*
- LIT-208 Fiction Into Film *or*
- LIT-230 American Cinema

Note(s):

*\*Courses are required for the Comics and Sequential Art Concentration*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Foundation Core Requirements

### **35 credits required**

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- DES-176 Introduction to Digital Narrative
- DES-205 Design Drawing and Concept Visualization
- DES-220 Introduction To 2D Digital Imaging
- DES-321 Digital Imagery Studio
- DES-390 Entertainment Design Portfolio and Professional Practices Seminar
- DES-490 Senior Project: Entertainment Design
- DES-X49 Co-op, Field Experience or Other: as approved by program director (1.00 cr.)

## Concentrations

**45 credits required**

### Animation Concentration

Animation Requirements (15 credits)

*Choose from the following:*

- DES-378 Animation Studio (*Repeat up to 12 credits*)
- DES-372 3D Modeling and Animation I
- DES-374 3D Modeling and Animation II
- DES-373 3D Modeling & Animation III

Design Studio Selectives (12 credits)

*Design Studio Selectives (12 credits)*

- DES-310 Graphic Design I
- DES-375 Digital Cinema Studio
- DES-379 Comics & Sequential Art Studio
- DES-389 Typography in Motion
- DES-3XX Interactive Environments (3.00 cr.)
- PHOTO-330 Introduction to Video Production

Art Studio Requirements (9 credits)

- ART-209 Painting I
- ART-301 Life Drawing I
- ART-XXX Studio Art course (3.00 cr.)

Art History (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-340 History of Interactive Media
- ARTH-341 History of Film

### Comics and Sequential Art Concentration

Comics and Sequential Art Requirements (15 credits)

*Choose from the following:*

- DES-378 Animation Studio (*May repeat once*)
- DES-379 Comics & Sequential Art Studio (*Repeat up to 12 credits*)

#### Design Studio Requirements (6 credits)

- DES-210 Letter Form Design
- DES-310 Graphic Design I

#### Art Studio Requirements (12 credits)

- ART-209 Painting I
- ART-301 Life Drawing I
- ART-401 Life Drawing II
- ART-XXX Art Studio Course (3.00 cr.)

#### Art History Requirements (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-340 History of Interactive Media
- ARTH-XXX Art History Selective or Aesthetics (3.00 cr.)

#### Related Requirement (3 credits)

- ENGL-342 Creative Writing II

#### Digital Cinema Concentration

#### Digital Cinema Requirements (18 credits)

*Choose from the following:*

- DES-375 Digital Cinema Studio (*Repeat up to 12 credits*)
- PHOTO-310 Introduction to Photographic Lighting
- PHOTO-330 Introduction to Video Production

#### Design Studio Selectives (9 credits)

*Choose from the following courses:*

- DES-372 3D Modeling and Animation I

- DES-374 3D Modeling and Animation II
- DES-378 Animation Studio
- DES-379 Comics & Sequential Art Studio
- DES-389 Typography in Motion

### Art Studio Requirements (9 credits)

- ART-209 Painting I
- ART-211 Contemporary Sculptural Practices I
- ART-XXX Studio Art course (3.00 cr.)

### Art History Requirements (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-340 History of Interactive Media
- ARTH-341 History of Film

Note(s):

*See program director for each list of approved selectives.*

## Environmental Science, B.S.

Go to program website

### Introduction

Graduates obtaining a B.S. in Environmental Science are well-prepared to meet today's rapidly shifting global career demands and to face opportunities focused on environmental preservation, restoration, and sustainable management. Four concentrations are designed to prepare students for professional careers and/or advanced studies. These concentrations provide proficiency and expertise in the areas of: Land Resources, Plant Science Innovations, Aquatic Biology, and Environmental Health. Upon completion of the environmental science program, students will possess a strong foundation of environmental science, use problem-solving skills, and apply theoretical principles to research, geographic information systems, statistical applications and sustainability modeling. Students are introduced to various components of industry via a required internship. Graduates are prepared to solve real life environmental problems as a result of practical skills developed in the field and in the lab. The focus on global ethical responsibility combined with communication and teamwork enhance students' professionalism and social awareness for success in individual and collaborative settings.

### General Requirements Bachelor of Science Degree

Total for graduation	120-122 credits
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General Education	40 credits
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Core Requirements	30 credits
Concentrations	50-52 credits

## Program Requirements

### General Education

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytical Reasoning and Natural Sciences (11 credits)

- CHEM-135 College Chemistry I
- PHYS-258 Introduction to Geology
- MATH-121 Introductory College Mathematics II

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including: Anthropology, Economics, Geography, Political Science, Psychology and Sociology.*

#### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses. Recommend RES-A or RES-B course.*

#### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses. Recommend RES-A or RES-B course.*

## Selectives (2 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Core Requirements

### 30 credits required

- BIO-242 Botany
- BIO-252 Zoology
- BIO-350 Ecology
- BIO-386 Introduction to Biostatistical Analysis
- CHEM-136 College Chemistry II
- ENGL-410 Scientific Communication
- ENSC-101 Environmental Science Profession
  
- ENSC-349 Cooperative Education Experience *or*
- ENSC-398 Field Experience in Environmental Science *or*
- ENSC-449 Cooperative Education Experience
  
- PHYS-358 Soil Science and Conservation

## Concentrations

### Aquatic Biology

#### Required Courses (31 credits)

- BIO-260 Ichthyology - Wisconsin Fishes *or*
- BIO-452 Wetland Ecology
  
- BIO-351 Ecology Laboratory
- BIO-450 Aquatic Ecology and Management
  
- BIO-451 Research Methods in Environmental Science *or*
- ENSC-425 Environmental Science and Sustainability Capstone
  
- CHEM-331 Quantitative Analysis
- CHEM-335 Instrumental Methods of Analysis

- GEOG-251 Introduction to Geographic Information Systems
- GEOG-351 Intermediate Geographic Information Systems
- GEOG-451 Advanced Geographic Information Systems

### Aquatic Biology Concentration - Selectives 1 (12 cr.)

*If not taken to satisfy other Aquatic Biology requirements, the following courses may be used to satisfy this selective requirement.*

- BIO-260 Ichthyology - Wisconsin Fishes
- BIO-270 Natural History of the Neotropics
- BIO-306 General Microbiology
- BIO-325 Aquatic Vascular Plant Taxonomy
- BIO-332 Genetics
- BIO-355 Entomology
- BIO-452 Wetland Ecology
- GEOG-452 Geographic Information Systems Research Analysis
- PHYS-458 Applied Watershed Hydrology
- RC-440 Environmental Leadership & Sustainable Management

### Aquatic Biology Concentration - Selectives 2 (7 cr.)

*The following may be used to satisfy this requirement.*

- BIO-2XX or higher
- CHEM-2XX or higher
- GEOG-310 Geography of Food
- LIT-275 Environmental Literature
- MATH-153 Calculus I
- PAX-2XX or higher
- PHYS-2XX or higher
- RC-2XX or higher
- SOC-2XX or higher
- SPCOM-308 Speech Skills for Business and Industry

## Environmental Health

### Required Courses (43 credits)

- BIO-262 Introduction to Industrial Hygiene and Occupational Health
- BIO-306 General Microbiology
- BIO-336 Infection and Immunity or
- PHYS-458 Applied Watershed Hydrology
- BIO-460 Epidemiology

- BIO-462 Environmental Toxicology
- BIO-451 Research Methods in Environmental Science or
- ENSC-425 Environmental Science and Sustainability Capstone
- CHEM-201 Organic Chemistry I
- CHEM-353 Environmental Chemistry
- FN-105 Food Service Sanitation
- MATH-153 Calculus I
- PHYS-241 College Physics I
- RC-381 Principles of Occupational Risk Control/Safety
- RC-440 Environmental Leadership & Sustainable Management

### Environmental Health Concentration - Selectives (7 credits)

*If not taken to satisfy other Environmental Health requirements, the following courses may be used to satisfy this selective requirement.*

- BIO-234 Physiology and Anatomy
- BIO-270 Natural History of the Neotropics
- BIO-336 Infection and Immunity
- BIO-355 Entomology
- BIO-358 Introductory Pharmacology
- BIO-360 Introduction to Neuroscience
- BIO-362 Advanced Physiology
- BIO-406 Food Microbiology
- CHEM-204 Organic Chemistry II Lecture
- CHEM-206 Organic Chemistry II Laboratory
- CHEM-311 Biochemistry
- CHEM-331 Quantitative Analysis
- GEOG-310 Geography of Food
- INMGT-400 Organizational Leadership
- MATH-154 Calculus II
- PHYS-458 Applied Watershed Hydrology
- RC-383 Occupational Safety and Health Standards

### Land Resources

#### Required Courses (34-36 credits)

- BIO-324 Vascular Plant Taxonomy
- BIO-351 Ecology Laboratory
- BIO-352 Restoration Ecology
- BIO-355 Entomology or



- BIO-253 Wildlife Techniques or
- BIO-260 Ichthyology - Wisconsin Fishes
- BIO-451 Research Methods in Environmental Science or
- ENSC-425 Environmental Science and Sustainability Capstone
- CHEM-452 Environmental Regulations Management
- GEOG-251 Introduction to Geographic Information Systems
- GEOG-351 Intermediate Geographic Information Systems
- GEOG-451 Advanced Geographic Information Systems
- PHYS-458 Applied Watershed Hydrology or
- BIO-450 Aquatic Ecology and Management *or*
- BIO-452 Wetland Ecology
- RC-440 Environmental Leadership & Sustainable Management

### Land Resources Concentration - Selectives (14-16 credits)

*If not taken to satisfy other Land Resources requirements, the following courses may be used to satisfy this selective requirement.*

- BIO-241 Ornamental Horticulture
- BIO-253 Wildlife Techniques
- BIO-260 Ichthyology - Wisconsin Fishes
- BIO-270 Natural History of the Neotropics
- BIO-322 Plant Pathology
- BIO-323 Dendrology
- BIO-325 Aquatic Vascular Plant Taxonomy
- BIO-332 Genetics
- BIO-342 Arboriculture
- BIO-343 Plant Physiology
- BIO-355 Entomology
- BIO-450 Aquatic Ecology and Management
- BIO-452 Wetland Ecology
- BIO-460 Epidemiology
- BIO-462 Environmental Toxicology
- CHEM-331 Quantitative Analysis
- CHEM-335 Instrumental Methods of Analysis
- CHEM-353 Environmental Chemistry
- GEOG-452 Geographic Information Systems Research Analysis
- PHYS-458 Applied Watershed Hydrology
- SPCOM-308 Speech Skills for Business and Industry

### Plant Science Innovations

## Required Courses (17 credits)

- BIO-322 Plant Pathology
- BIO-343 Plant Physiology
- BIO-451 Research Methods in Environmental Science or
- BIO-489 Advanced Biology Experience or
- CHEM-489 Advanced Chemistry Experience or
- ENSC-425 Environmental Science and Sustainability Capstone
- CHEM-201 Organic Chemistry I
- CHEM-331 Quantitative Analysis

## Plant Science Innovations Concentration - Selectives 1 (20 credits)

*If not taken to satisfy other Plant Science Innovations requirements, the following courses may be used to satisfy this selective requirement.*

- BIO-253 Wildlife Techniques
- BIO-306 General Microbiology
- BIO-323 Dendrology
- BIO-324 Vascular Plant Taxonomy
- BIO-332 Genetics
- BIO-342 Arboriculture
- BIO-351 Ecology Laboratory
- BIO-355 Entomology
- BIO-370 Biotechnology
- BIO-470 Advanced Biotechnology
- CHEM-204 Organic Chemistry II Lecture
- CHEM-206 Organic Chemistry II Laboratory
- CHEM-301 Physical Chemistry Lecture
- CHEM-311 Biochemistry
- CHEM-335 Instrumental Methods of Analysis
- CHEM-353 Environmental Chemistry
- MATH-153 Calculus I
- MATH-154 Calculus II
- PHYS-241 College Physics I or
- PHYS-281 University Physics I
- PHYS-242 College Physics II or
- PHYS-282 University Physics II
- PHYS-458 Applied Watershed Hydrology or
- RC-440 Environmental Leadership & Sustainable Management

## Plant Science Innovations Concentration - Selectives 2 (13 credits)

*The following may be used to satisfy the requirement.*

- BIO-241 Ornamental Horticulture
- BIO-2XX or higher
- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- CHEM-2XX or higher
- GEOG-3XX or higher
- LIT-275 Environmental Literature
- PHYS-2XX or higher
- SOC-2XX or higher
- MATH-153 Calculus I (*Recommended for students interested in graduate school*)

## Family and Consumer Sciences Education, B.S.

Go to program website

### Introduction

The Bachelor of Science degree in Family and Consumer Sciences Education prepares students to teach in elementary, middle, junior high and high school settings across the United States. The program prepares professionals who are knowledgeable regarding subject matter and content in the field of family and consumer sciences education, including life-span human development, personal and family relationships, parenting, consumer economics, food and nutrition, housing, textiles, and apparel. The program is also offered with a distance option for geographically-bound students seeking Career and Technical Education certification.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Content Core	36 credits
Professional Education	44 credits

*An overall cumulative GPA of 2.75 is required for graduation.*

### Program Requirements

#### General Education

*40 credits required*

## Communication Skills (9 credits)

*English and Speech courses require a grade of C or better.*

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
  
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
  
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

- BIO-132 Human Biology
- FN-123 Science of Food
- XXX-XXX *Any approved math or statistics course (2.00-4.00 cr.)*

## Arts and the Humanities (6 credits)

- LIT-XXX Any literature course
- XXX-XXX Any fine arts course (*creative or performing arts, music appreciation*)
- XXX-XXX Any humanities course (*art history, foreign language and culture, history, or philosophy*)

## Social and Behavioral Sciences (6 credits)

- ECON-201 General Economics *or*
- ECON-210 Principles of Economics I
  
- PSYC-110 General Psychology

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

EDUC 330 and HIST 210 or ANTH 220 are required to meet teaching license requirements.

## Content Core

*36 credits required*

- APRL-166 Apparel Construction I
- APRL-167 Textiles I: Theory, Fibers and Structures
- FCSE-380 Consumer Economics
- FCSE-385 Family Housing
- FN-102 Nutrition for Healthy Living
- FN-105 Food Service Sanitation
- FN-215 Art and Science of Food
- HDFS-124 Human Development: Early Childhood
- HDFS-215 Dynamics of Family Development
- HDFS-313 Parent Education/Involvement
- HDFS-365 Family Resource Management
- *Select 6-7 credits from APRL, FN, HDFS or HLTED.*

## Professional Education - On Campus

*44 credits required*

*All courses require a "C" or better*

- CTE-302 Principles of Career and Technical Education
- CTE-360 Coordination of Work-based Learning (WBL) Programs
- CTE-440 Instructional Evaluation in Career and Technical Education
- EDUC-303 Educational Psychology
- EDUC-326 Foundations of Education
- FCSE-101 Introduction to Family and Consumer Sciences Education
- FCSE-201 Teaching Methods in Family and Consumer Sciences Education
- FCSE-341 Prestudent Teaching in FCSE Classrooms \*
- FCSE-355 Seminar: Emerging Practices and Classroom Management \*
- FCSE-390 Family and Consumer Sciences Education Curriculum \*
- FCSE-448 Student Teaching-Family and Consumer Sciences Education \*
- RDGED-382 Content Area Reading \*
- SPED-430 Inclusion of Students with Exceptional Needs

Note(s):

*\* must be accepted into the School of Education prior to enrollment.*

## Professional Education - Distance Delivery

*44 credits required*

*All courses require a "C" or better*

- CTE-302 Principles of Career and Technical Education
- CTE-360 Coordination of Work-based Learning (WBL) Programs
- EDUC-303 Educational Psychology
- FCSE-341 Prestudent Teaching in FCSE Classrooms \*
- FCSE-448 Student Teaching-Family and Consumer Sciences Education \*  
Select 2 credits from CTE area.
- RDGED-382 Content Area Reading
- SPED-430 Inclusion of Students with Exceptional Needs

Note(s):

*\* must be accepted into the School of Education prior to enrollment.*

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a grade of at least 2.00 (C) in FCSE-101 Introduction to Family and Consumer Sciences Education
- Earn a grade of at least 2.00 (C) in EDUC-326 Foundations of Education
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching
- Receive passing scores on Embedded Signature Assessments (ESA)

## Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment
- For licensure students must pass the EDTPA
- Receive a satisfactory disposition review

## Food Science and Technology, B.S.

Go to program website

### Introduction

The Food Science and Technology program prepares graduates for careers in the nation's largest business - the food industry. The program allows students the flexibility to choose courses appropriate for individual career goals or graduate study. Students focus on a variety of applicable studies such as food science, quality assurance, food analysis, and food ingredient development. Career goals might include administration, large quantity food production, sales or service, food styling, food marketing and media, or home economics. Graduates have pursued rewarding careers in restaurants and delis, health care facilities, schools and prisons. Some have found relevant career opportunities on cruise ships, or with television stations, magazines or newspapers.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	43 credits
Major Studies	59-62 credits
Electives, Minor or Student-designed focus area	15-18 credits

*Work experience must be obtained through participation in the Field Experience program (after junior year). A 2.25 or better grade point average is required for graduation.*

### Program Requirements

#### General Education

**43 credits required**

Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Science (13 credits)

- CHEM-135 College Chemistry I
- BIO-234 Physiology and Anatomy
- MATH-153 Calculus I *or*
- MATH-156 Calculus and Analytic Geometry I

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

- STAT-320 Statistical Methods

### Major Studies

#### **59-62 credits**

- BIO-306 General Microbiology
- BIO-406 Food Microbiology



- BUMKG-330 Principles of Marketing *or*
- BUMGT-304 Principles of Management
  
- CHEM-201 Organic Chemistry I
- CHEM-311 Biochemistry
- CHEM-315 Food Chemistry
  
- EDUC-307 Racial and Cultural Perspectives on Applied Human Relations *or*
- INMGT-400 Organizational Leadership
  
- FN-240 Food Science
- FN-123 Science of Food
- FN-212 Nutrition
- FN-350 Unit Operations in Food Processing
- FN-400 Food Quality
- FN-410 Food & Nutrition Policy Regulation & Law
- FN-435 Food Analysis
- FN-438 Experimental Foods
- FN-442 Basic Sensory Analysis
- FN-450 Food Engineering
  
- FN-449 Cooperative Education Experience *or*
- FN-497 Field Experience (2.00 cr.) *or*
- FN-499 Independent Study
  
- PHYS-211 Introduction to Physics *or*
- PHYS-241 College Physics I

## Electives, Minor or Student-Designed Focus Area

### 15-18 credits required

*Courses must be approved by adviser. Elective credits may be used to satisfy MATH and/or CHEM prerequisite requirements.*

## Game Design and Development-Art, B.F.A.

### Introduction

*The Bachelor of Fine Arts (BFA) in Game Design and Development-Art prepares students to apply knowledge, techniques and methods necessary to become a successful artist and game designer. The student will have a balance of art, design, game design, art history, computer science, English, and psychology to help them become a vital part of the game design and development industry upon graduation. The industry has shown a steady increase in need for more game developers (which includes artists, designers, and programmers) over the last 10 years. The increase in jobs will continue.*

*The BFA in Game Design and Development provides outstanding opportunities to create art and games for a vast array of applications and industries, including entertainment, advertising, simulation and education. Students will develop a strong*

*foundation from an award-winning art and design program while experiencing a hands-on approach to education that uses industry standard software and hardware. Collaboration is the backbone of the major with multiple courses bringing art and computer science students together to form interdisciplinary teams. BFA students will learn and use skills necessary for game development such as game design principles, foundations in drawing and design, 2D pixel art and animation, 3D modeling and animation, concept art in environment and character design, and graphic and user interface design.*

*A required mid-program portfolio review offers game design students an assessment of their progress in foundation art and design courses. A 2.5 grade point average and a 2.0 or better in art and design department (ART/DES/ARTH) and game design courses (GDD) is required to complete this Bachelor of Fine Arts degree. Game Design students must present a portfolio of their work in the final semester as part of a public exhibition hosted by the School of Art and Design. The BFA in Game Design program provides a specialized education and is accredited by the National Association for Schools of Art and Design.*

## **Program Requirements**

Total for Graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## **Program Requirements**

### **General Education**

#### **40 credits required**

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 or
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 or
- ENGL-112 Freshman English--Honors II or
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytical Reasoning and Natural Sciences (11 credits)**

- CS-141 Introduction to Programming
- MATH-118 Concepts of Mathematics (*or higher*)
- PHYS-211 Introduction to Physics
- PHYS-212 Introduction to Physics: Lab

#### **Arts and Humanities (6 credits)**

- ARTH-223 Survey of Art--Ancient Through Medieval  
*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

- PSYC-225 Psychology of Video Games  
*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (2 credits)

*Course may be selected from any category to meet the 40-credit requirement.*

## Major Requirements

**80 credits required**

### Game Design Core (15 credits)

- GDD-101 Introduction to Video and Computer Game Design and Development
- GDD-325 Two Dimensional Game Design and Development
- GDD-450 Three-Dimensional Game Design and Development I
- GDD-451 Three-Dimensional Game Design and Development II

### Art and Design Foundation (41 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- ART-301 Life Drawing I
- DES-176 Introduction to Digital Narrative
- DES-205 Design Drawing and Concept Visualization
- DES-220 Introduction To 2D Digital Imaging
- DES-225 Pixel and Vector Art

- DES-310 Graphic Design I
- DES-325 Interactive Design I: Introduction to Web Design
- DES-350 3D Game Art and Engines
- DES-372 3D Modeling and Animation I
- DES-390 Entertainment Design Portfolio and Professional Practices Seminar
- DES-449 Cooperative Education Experience

Choose either 2D track or 3D track (15 credits)

### 2D Track

- ART-209 Painting I
- DES-370 Interactive Design II: Principles and Methods
- DES-378 Animation Studio
- DES-321 Digital Imagery Studio

Selectives (3 credits)

*Selectives must be approved by advisor (ART, DES, GDD)*

### 3D Track

- ART-211 Contemporary Sculptural Practices I or
- ART-213 Ceramics I
- DES-256 Art Workshop Topic: Interactive Environments
- DES-373 3D Modeling & Animation III
- DES-374 3D Modeling and Animation II

Selectives (3 credits)

*Selectives must be approved by advisor (ART, DES, GDD)*

Art and Design History Requirements (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-340 History of Interactive Media
- *Art History Selective (3 credits)*

## Game Design and Development-Computer Science, B.S.

Go to program website

## Introduction

The world is going digital. Entertainment is no exception. Sales of computer and video games have grown consistently over the past ten years and the industry is predicted to expand even more. Non-entertainment industries such as education, government, health, military, science, corporate training, first responders, and social change are also embracing the game technology. Serious games feature the use of interactive game technologies within non-entertainment sectors for training, advertising, simulation, or education.

Modern games are among the most demanding of computer programming applications, requiring knowledge of advanced mathematics and physics which form the basis of the 3D graphics, artificial intelligence, and game engines that make up the game programs. Using core skills in art and design such as drawing, digital imaging and animation, game artists create the visual elements necessary for the game including heads-up interface components, 3D environments and 3D characters. To be successful in the industry, you must be skilled in your area of expertise (*art or computer science*), be able to work with your counterparts, and apply those skills to creating games.

The Game Design and Development curriculum is based on a firm foundation of both computer science and art. Students will develop deeper skills in either art or computer science, before joining back together in the three capstone advanced project courses. These courses simulate industry by creating games using a team environment.

## Program Requirements

## Program Requirements

### General Education

#### **41 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-156 Calculus and Analytic Geometry I
- PHYS-281 University Physics I

## Arts and Humanities (6 credits)

- LIT-208 Fiction Into Film
- *Choose remaining 3 credits from the areas of art or art history.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

- ICT-215 Cybertechnology Ethics

## Selectives (3 credits)

- CS-144 Computer Science I

## Major Studies

**79 credits required**

## Computer Science (32 credits)

- CS-145 Computer Science II
- CS-244 Data Structures
- CS-248 Web and Internet Programming
- CS-290 Professional Seminar
- CS-343 Mathematical Foundations of Computer Graphics
- CS-354 Algorithms and Artificial Intelligence
- CS-441 Computer Architecture
- CS-442 Systems Programming
- CS-443 Database Systems Manipulation and Design
- CS-448 Software Engineering
- CS-449 Cooperative Education Experience

## Mathematics (17 credits)

- MATH-157 Calculus and Analytic Geometry II
- MATH-270 Discrete Mathematics
- MATH-275 Linear Algebra
- PHYS-360 Physics Modeling for Game Programmers
- MATH-158 Calculus III or higher, *or*
- MSCS-2XX or higher, *or*
- STAT-3XX or higher

## Game Design and Development (21 credits)

- ARTH-340 History of Interactive Media
- CS-326 Programming in Game Engines
- GDD-101 Introduction to Video and Computer Game Design and Development
- GDD-325 Two Dimensional Game Design and Development
- GDD-450 Three-Dimensional Game Design and Development I
- GDD-451 Three-Dimensional Game Design and Development II

## Selectives (9 credits)

- CS-XXX *Any upper level CS course (not listed above), including additional co-ops, approved by Advisor (1.00-3.00 cr.)*
- EDUC-170 Video Games and Simulations in Educational Environments
- ENGL-415 Technical Writing
- GDD-XXX *Any upper level GDD course (not listed above), approved by Advisor (3.00 cr.)*
- MATH-XXX *Any upper level MATH course (158 or higher, not listed above) approved by Advisor (3.00 cr.)*  
*Any upper level MSCS or STAT course approved by advisor.*

## Golf Enterprise Management, B.S.

[Go to program website](#)

### Introduction

The B.S. in Golf Enterprise Management program provides a comprehensive and challenging academic experience that will prepare graduates who are leaders in the golf business profession. The program will offer a broad exposure to all facets of the business of golf industry through its interdisciplinary curriculum. The program includes exposure to golf industry best practices. Students are immersed in experiential learning through well-defined co-ops and internships.

Upon graduation, students will be able to analyze major trends in the golf industry, including tourism, consumer interests, course ownership and management, and golf retail businesses. Graduates will be able to distinguish the missions of principal national and international associations in the golf industry; understand golf facility operations from perspectives of resort, private, municipal, and daily fees courses; apply business, accounting, and marketing principles to meet management needs of golf enterprises; develop and apply strategies for attracting new customers and retaining existing customers of golf operations; apply the principles of turf management, soil science and environmental science to the layout, design and management of golf courses; and integrate the knowledge and skills obtained in the curriculum through practical experiences in the golf industry.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Major Studies	50 credits
Electives	30 credits

## **Program Requirements**

### **General Education**

*40 Credits*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

- MATH-118 Concepts of Mathematics
- STAT-130 Elementary Statistics
- *Remaining course must be Biology with a lab from the approved course list.*

#### **Arts and Humanities (6 credits)**

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

#### **Social and Behavioral Sciences (6 credits)**

- ECON-210 Principles of Economics I
- *Select remaining credits from the approved course list in another area including anthropology, geography, political science, psychology and sociology.*



## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

Courses/credits must be selected from the list of approved social responsibility and ethical reasoning courses.

## General Education Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Professional Studies

*64 Credits*

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUFIN-340 Business Finance *or*
- PM-362 Real Estate Market Analysis and Investment Analysis
- BULGL-318 Business Law I
- BUMGT-304 Principles of Management *or*
- HT-457 Hospitality Management Strategies
- BUMKG-330 Principles of Marketing *or*
- HT-391 Principles of Social Media Marketing Management
- GEM-101 Introduction to Golf Enterprise Management
- GEM-201 Principles of Golf Enterprise Management
- GEM-224 Fitting and Swing Analysis
- GEM-250 Turfgrass Management for Golf Courses
- GEM-277 Software and Technology
- GEM-301 Customer Development, Retention and Marketing
- GEM-311 Customer Experience Management
- GEM-325 Golf Shop Merchandising
- GEM-445 Sports Event Management
- GEM-450 Environmental Golf Course Management
- GEM-X49 Co-op or Field Experience (*Two co-ops or field experiences are required*) (4.00 cr.)
- HT-2XX Hospitality Managerial Cost Accounting
- HT-352 Club Management
- HT-460 Hospitality Industry Law and Liability
- PM-280 Hospitality Facilities Management
- PSYC-382 Human Resource Management *or*

- HT-461 Hospitality Employee Relations

## Program Selectives (16 credits)

- ECON-215 Principles of Economics II
- GEM-350 Golf Course Soils, Layout, and Design
- HT-330 Resort Planning and Operation
- HT-383 Yield Management

*Any GEM, HT, PM, SRVM, or Business course 3XX or 4XX level may apply.*

## Graphic Design and Interactive Media, B.F.A.

[Go to program website](#)

### Introduction

The Bachelor of Fine Arts (*BFA*) in Graphic Design and Interactive Media program prepares students with the skills and flexibility to adapt to the rapidly changing nature of the graphic design and interactive media industry. UW-Stout graduates work at and have opened their own design firms nationally and globally. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

Developing the ability and knowledge to communicate using digital/technical communication systems and processes while understanding social, psychological and economic implications in relation to a variety of clients and design situations is a central objective of this proposed program, as well. Students will acquire "hands on" experience using industry standard tools, software and creative techniques, and are encouraged to participate in research projects, co-ops or study abroad programs.

A required mid-program portfolio review offers graphic design and interactive media students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 overall grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. An experiential learning component is required of all graduates of the BFA in Graphic Design and Interactive Media program, and may be successfully completed by participating in a co-op, internship, international study program, field experience or sponsored project. Graphic Design and Interactive Media students must present a portfolio of their work in the final semester as part of a public exhibition hosted by the School of Art and Design.

The BFA in Graphic Design and Interactive Media program provides students with an innovative education that is accredited by the National Association of Schools of Art and Design.

### General Requirements

#### Bachelor of Fine Arts

Total for graduation	120 credits
General Education	40 credits
Concentration Requirements	80 credits

### Program Requirements

## General Education

### 40 credits required

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

*Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

#### Arts and Humanities (6 credits)

- ARTH-223 Survey of Art--Ancient Through Medieval

#### Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology

#### Additional Courses:

*Choose three additional credits from one or more areas including anthropology, economics, geography, political science and sociology.*

#### Contemporary Issues (3 credits)

*Courses must be selected from the approved contemporary issues courses.*

#### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

#### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Concentration Requirements

*80 credits required*

### Design Concentration

#### Studio and Related (44 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- ART-217 Printmaking I
- DES-200 Design Concepts and Problems
- DES-205 Design Drawing and Concept Visualization
- DES-210 Letter Form Design
- DES-220 Introduction To 2D Digital Imaging
- DES-310 Graphic Design I
- DES-325 Interactive Design I: Introduction to Web Design
- DES-360 Graphic Design II
- DES-370 Interactive Design II: Principles and Methods
- DES-480 Senior Project - Graphic Design
- DES-XXX Co-op, Field Experience or other as approved by program director (2.00 cr.)

#### Design Studio Selectives (6 credits)

*Select one 2D and one 3D course for a total of 6 credits; see adviser for a list of approved courses.*

#### Art Studio Selectives (9 credits)

*Students must choose at least one 2D and one 3D Art Studio course, and take a total of three courses or 9 credits; see adviser for a list of approved courses.*

#### Art History (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-319 History of Design
- ARTH-333 History of Interiors and Furnishings

#### Technical (9 credits)

- CMG-141 Cross-Media Graphics

- CMG-251 Premedia Graphics Production
- PHOTO-330 Introduction to Video Production

#### Related (3 credits)

- PSYC-377 Consumer Psychology

#### Interactive Media Concentration

#### Studio and Related (41 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- DES-200 Design Concepts and Problems
- DES-205 Design Drawing and Concept Visualization
- DES-220 Introduction To 2D Digital Imaging
- DES-310 Graphic Design I
- DES-325 Interactive Design I: Introduction to Web Design
- DES-360 Graphic Design II
- DES-370 Interactive Design II: Principles and Methods
- DES-385 Interactive Digital Design III: Advanced Concepts
- DES-480 Senior Project - Graphic Design
- DES-XXX Co-op, Field Experience or other as approved by Program Director (2.00 cr.)

#### Design Studio Selectives (6 credits)

*See adviser for a list of approved courses.*

#### Art Studio Selectives (12 credits)

*Students must choose at least one 2D and one 3D Art Studio course, and take a total of four courses or 12 credits; see adviser for a list of approved courses.*

#### Art History (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-319 History of Design
- ARTH-XXX Art History Selective (3.00 cr.)

#### Technical (9 credits)

- CS-144 Computer Science I
- CS-248 Web and Internet Programming
- PHOTO-330 Introduction to Video Production

#### Related Requirement (3 credits)

- ENGL-388 Writing for the Internet

## Health, Wellness and Fitness B.S.

Go to program website

### Introduction

The Health, Wellness and Fitness program prepares students to enter the healthcare arena as preventative healthcare workers. Students become knowledgeable of the causes of the major controllable health care issues in society today and into the future. They gain the skills to assist others to develop healthier lifestyles to combat major controllable health issues such as obesity, diabetes, various coronary diseases and conditions. Students learn business management skills to aid entry into the profession. The program integrates the professional domains of nutrition, fitness, health education, business procedures and management and community health to prepare prevention specialists.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	59 credits
Concentration	21 credits

### Program Requirements

#### General Education (40 credits)

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*

- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics
- BIO-132 Human Biology

Note(s):

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology
- *Remaining course must be from an area including anthropology, economics, geography, political science and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

- HWF-340 Community CPR, Automatic External Defibrillation and First Aid

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

**59 credits**

### Human Sciences (16 credits)

- BIO-234 Physiology and Anatomy
- CHEM-115 General Chemistry
- FN-207 Medical Terminology
- HLTH-355 Kinesiology
- HLTH-365 Physiology of Exercise

### Health and Wellness (19 credits)

- HWF-100 Introduction to Health, Wellness & Fitness Industry
- HWF-275 Lifespan Health, Wellness and Fitness
- HWF-XXX Relaxation/Stress Management (3.00 cr.)
- HWF-322 Fitness Assessment
- HLTH-350 Prevention and Care of Athletic Injuries
- HLTED-360 Personal Health and Fitness
- HLTED-375 Methods In Health, Wellness and Fitness

### Nutrition (5 credits)

- FN-212 Nutrition
- FN-312 Nutritional Assessment

### Psychology/Behavior Management (3 credits)

- PSYC-371 Introduction to Health Psychology *or*
- PSYC-377 Consumer Psychology

### Business and Management (14 credits)

- BUACT-206 Introduction to Financial Accounting
- BUMGT-304 Principles of Management
- BUMKG-308 Marketing for Non-Profit Organizations
- BULGL-318 Business Law I *or*
- HT-460 Hospitality Industry Law and Liability
- HWF-390 Recreational Facilities Management and Leadership

### Preprofessional Experience (2 credits)

- HWF-398 Field Experience in Health, Wellness and Fitness
- HWF-498 Advanced Field Experience in Health, Wellness and Fitness



## Concentrations

### Fitness Professional (21 credits)

- FN-355 Sports Nutrition
- HWF-370 Personal and Group Exercise: Theory and Methods
- HWF-418 Administration of Strength Training and Conditioning
- HT-352 Club Management
- XXX-XXX Electives (8.00 cr.)

Note(s):

*Through advising, select courses to fulfill concentration. Examples include courses from areas such as nutrition, aging, adventure education, lifespan sports, racquet sports, psychology, rehabilitation and disability.*

### Health and Wellness Promotions (21 credits)

- BIO-128 Community Health
- REHAB-320 Rehabilitation and Chemical Dependency
- HDFS-345 Health Care Dilemmas & Decisions for Families
- FN-380 Community Nutrition
- HLTED-376 Organization and Administration of Health Education
- XXX-XXX Electives (6.00 cr.)

Note(s):

*Through advising, select courses to fulfill concentration. Examples include courses from areas such as nutrition, aging, disability, leisure activities, psychology and rehabilitation.*

## Honors College

Go to Program website

### Academic Requirements

#### Entrance into the Honors College

Students are accepted into the Honors College in one of two ways: being invited to join based on high academic achievement or by applying using the application form on this website. Students from a wide range of academic experiences are encouraged to apply and have successfully completed the college's requirements.

#### Honors Units

Honors College students complete eight honors units during their time at Stout. Honors units include an exciting variety of course offerings each semester, study abroad opportunities, and Honors Contracts.

**Courses:** We have a rich variety of courses in every general education category. Students earn general education credits by taking honors courses in place of regular classes. Students read primary source materials rather than textbooks and discussion-based classes are centered on important questions. Students must earn a grade of B or better in a course in order to earn one honors unit. A three credit course will count as one honors unit. Once in a student's career, a four or five credit course will earn two honors units, with a grade of B or better.

**Contracts:** Honors College students must complete at least one Honors Contract prior to graduation. Successful completion of a contract earns a student one honors unit. To complete a contract, students meet with a faculty mentor to design and accomplish a project that interests them and that adds depth or breadth to their study. Students work with their mentor to complete a substantial project equivalent to approximately 60 hours of work. The student may complete no more than two Honors Contracts in a single academic area.

**Capstone:** The Honors Capstone is a two-unit option for senior-level students. This is a major interdisciplinary research project that may build upon a capstone in the major. It requires at least 120 hours of work. Capstone projects are encouraged but not required.

**Study Abroad Opportunities:** Students who study abroad for a semester, summer session or WinTerM, and receive a B or better in at least one course of study, will earn one honors unit. Students who study abroad for a full year, and earn B or better in at least one course per semester abroad, will receive two honors units. Study abroad is encouraged but not required.

### **Honors Colloquia**

Each semester all honors students in the college consider an issue and read a related text. Readings are done independently and a date is set for the whole of the Honors College student body to meet to discuss the topic in small groups. Members of the faculty facilitate the small group discussions. The evening ends with each group forming a question or statement summarizing their discussions. Attendance and participation is required to maintain good standing in the Honors College.

### **Honors Cultural Enhancement Events**

Honors events are designed to expand the intellectual breadth of our student body. They include trips to see plays or musical performances, nature-study trips, documentary screenings, service activities or campus speakers among others approved by the Honors College. Students are required to attend a minimum of one enhancement event per year.

### **Transfer Students**

Transfer students are encouraged to set up an appointment and meet with the directors to determine eligibility for Honors College and suitability of honors courses and options towards the completion of their majors.

## **Requirement: 8 Honors Units**

Including the following:

- Minimum of one Honors contract - students may complete a maximum of two contracts in any single discipline. Maximum of three contracts, unless approved by director
- Honors courses with a B or better - students may earn two honors units for the first 4- or 5-credits honors course they complete with a B or better. Subsequent 4- or 5-credit courses will count for one unit
- Study abroad experience in which student earns a grade of B or better in at least one course - students may gain a maximum of two honors units through study abroad. Each separate experience/country counts as an honors unit
- Honors capstone, which counts for two units - students may complete a maximum of one honors capstone
- Eight Honors Colloquia - students studying abroad or completing coops/internships do not need to participate in colloquia for the semesters they are off campus
- Four Honors Events

## **Hotel, Restaurant and Tourism Management, B.S.**

Go to program website

## Introduction

Hotel, restaurant and tourism management is one of the largest and fastest growing industries in the United States. Each year, leisure time increases for thousands of Americans, and the demands on the hospitality industry are growing. Existing lodging and dining facilities are expanding and new businesses are developing to accommodate the increased demand for hospitality services.

UW-Stout's Hotel, Restaurant and Tourism Management majors receive a variety of training. The program includes studies in general education to provide students a flexible background, enabling them to adapt to a wide variety of situations in today's rapidly changing society. A choice of professional selectives provides students with flexibility to pursue a specialized field of study. The curriculum is designed to prepare competent, creative and responsible managers. Graduates are employed in the hospitality food and beverage industry, and in hotels and tourism facilities.

## General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	59 credits
Professional Selectives	21 credits

*A "C-" (1.67) or better is required for each course in the professional studies. A 2.75 grade point average is required for graduation.*

## Program Requirements

### Racial and Ethnic Studies (6 credits\*)

*Three credits must be selected from RES-A.*

\*Students can select courses that count for more than one requirement within General Education (GE), Racial and Ethnic Studies (RES), and Global Perspectives (GLP).

### Global Perspective (6 credits\*)

*Complete a program of university-approved work or study abroad or 6 credits of global perspective approved courses.*

\*Students can select courses that count for more than one requirement within General Education (GE), Racial and Ethnic Studies (RES), and Global Perspectives (GLP).

### General Education (40 credits)

### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics
- STAT-130 Elementary Statistics
- *Remaining course must be a natural science course with a lab.*

### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- ECON-210 Principles of Economics I

### Additional Courses:

*Choose 3 additional credits from one or more areas including anthropology, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

### Professional Studies (80 credits)

## Operations Management (30 credits)

- HT-121 Principles of Foodservice Operations
- HT-140 Principles of Tourism
- HT-235 Lodging Systems
- HT-325 Food Service Production and Operations Management  
GEM-XXX Customer Experience Management
- PM-280 Hospitality Facilities Management
  
- HT-326 Introduction to Wines and Spirits or
- HT-352 Club Management
  
- HT-340 Development of Tourism Attractions
- HT-454 Security and Risk Management for the Hospitality Industry
- HT-457 Hospitality Management Strategies

## Financial and Revenue Management (21 credits)

- BUACT-206 Introduction to Financial Accounting
- HT-344 Hospitality and Tourism Marketing and Sales
- HT-391 Principles of Social Media Marketing Management
- HT-383 Yield Management
- HT-XXX Hospitality Accounting and Finance
- HT-XXX Hospitality Cost Accounting
- HT-XXX Hospitality Sales

## Organizational Management (15 credits)

- HT-101 Principles of Hospitality Organizational Management
- HT-350 Hospitality Diversity Management
- HT-460 Hospitality Industry Law and Liability
- HT-461 Hospitality Employee Relations
- HT-490 Hospitality Capstone

## Co-op / Internship Experience (2 credits)

- HT-349 Cooperative Education Experience
- HT-449 Cooperative Education Experience

## Professional Selectives (12 credits)

*Courses from golf enterprise management (GEM), hospitality and tourism (HT), and property management (PM), or an international experience approved by the program director may be taken to reach the 12- credit requirement.*

## Human Development and Family Studies, B.S.

Go to program website

### Introduction

The Human Development and Family Studies (*HDFS*) field is dedicated to the study of human development and the interrelationships among individuals, families and communities. It is an interdisciplinary field that draws from other social sciences but has established distinct assumptions, approaches to studying families, and world view. A multidisciplinary approach provides students with both a broad perspective and specialized knowledge. Our goal is to foster positive sensitivity to the needs of families and their members through the lenses of relationships, culture, gender, age, and life stage, among others.

The program integrates academic study with significant experiential learning with individuals of all ages, families and community groups. Students are involved in observation/participation, field experience, independent study and practicum throughout the program. Hospitals, human service agencies, community groups, adolescent group homes and homes for senior citizens provide opportunities for the synthesis of practical and theoretical knowledge.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	46 credits
Major Studies	59 credits
Concentration or minor	15 credits

Students must have a cumulative grade point average of 2.5 within the major studies for graduation and to register for the internship experience.

### Program Requirements

#### General Education

**46 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I

- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

*Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (12 credits)

- POLS-210 American Government
- PSYC-110 General Psychology
- SOC-110 Introductory Sociology

## Additional Courses:

*Choose 3 additional credits from one or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

- HDFS-257 Lifespan Sexuality

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **50 credits required**

- HDFS-101 Introduction to Human Development and Family Studies
- HDFS-115 Healthy Couple Relationships
- HDFS-124 Human Development: Early Childhood
- HDFS-215 Dynamics of Family Development
- HDFS-225 Skill Training for Individual/Family Interventions

- HDFS-270 Seminar on Self-Growth
- HDFS-325 Human Development: Middle Childhood and Adolescence
- HDFS-330 Human Development: Early and Middle Adulthood
- HDFS-335 Critical Cultural Competence
- HDFS-336 Practice in Critical Cultural Competence
- HDFS-340 Human Development: Late Adulthood
- HDFS-345 Health Care Dilemmas & Decisions for Families
- HDFS-365 Family Resource Management
- HDFS-420 Family Research and Methodology
- HDFS-450 Family Policy
- HDFS-456 Abuse and the Family
- HDFS-490 Professional Issues: Human Development and Family Studies
- HDFS-491 Internship in Human Development and Family Studies

## Electives (9 credits)

*Select additional courses to fulfill the 120-credit requirement.*

## Note(s):

The B.S. Human Development and Family Studies undergraduate degree program at the University of Wisconsin-Stout has been reviewed by the National Council on Family Relations. It has been recognized as an NCFR CFLE-approved program offering coursework covering the content required for the Certified Family Life Educator (*CFLE*) designation. Graduates of NCFR CFLE-approved programs qualify to apply for the CFLE designation via an Abbreviated Application process.

## Student-Designed Concentration, Certification or Minor

*15 credits required*

*Students complete the degree with selectives chosen in consultation with the program director, or any minor in consultation with the advisor.*

## Industrial Design, B.F.A.

Go to program website

## Introduction

The Bachelor of Fine Arts (*BFA*) in Industrial Design program prepares students for careers in the field of contemporary product design. UW-Stout industrial design graduates hold successful careers designing a wide array of products including medical devices, prosthetics and bicycles, as well as household and industrial products, tools and devices. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

The BFA in Industrial Design program provides a comprehensive applied learning environment that prepares graduates for a successful career in the field of contemporary product design. Industrial designers create and develop concepts and designs that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer. As



part of their program, students in the industrial design program are required to participate in a regional, national or international co-op or internship. UW-Stout also provides numerous opportunities to study abroad internationally.

A required mid-program benchmark portfolio review offers industrial design students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this degree. Students must present a portfolio of their work in the final two semesters of their program, as part of a public exhibition hosted by the School of Art and Design.

This UW-Stout degree is one of only two industrial design programs in Wisconsin and Minnesota, and is accredited by the National Association of Schools of Art and Design.

## **General Requirements**

### **Bachelor of Fine Arts Degree**

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## **Program Requirements**

### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

#### **Arts and Humanities (6 credits)**

- ARTH-223 Survey of Art--Ancient Through Medieval

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

- DES-150 Introduction to Sustainable Design and Development

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

**80 credits required**

## Studio and Related Requirements (47 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- ART-211 Contemporary Sculptural Practices I
- DES-205 Design Drawing and Concept Visualization
- DES-220 Introduction To 2D Digital Imaging
- DES-310 Graphic Design I
- DES-331 Industrial Design 3: Product Interface Design
- DES-405 Advanced Design Drawing
- DES-431 ID5: Industrial Design Senior Studio I
- DES-432 ID6: Industrial Design Senior Studio II
- DES-XXX Field Experience or Cooperative Education (2.00 cr.)

## Art Studio Selective Requirements (12 credits)

*Select additional studio experiences from ART or DES courses. A minimum of 6 credits must have an ART prefix.*

## Art History Requirements (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-319 History of Design
- ARTH-XXX Art History Selective or Aesthetics (3.00 cr.)

## Technical Requirements (12 credits)

- ENGG-266 Engineering Graphics Surface Modeling & Rendering
- MFGT-110 Materials and Manufacturing Processes
- MFGT-202 Welding and Casting Processes *or*
- MFGT-204 Polymer Processes

## Information and Communication Technologies, B.S.

Go to program website

### Introduction

Developed in response to place-bound professionals' need for additional education, the Bachelor of Science degree in Information and Communication Technologies is a degree completion collaborative effort between Wisconsin Technical Colleges and UW-Stout that provides flexibility for those that are place-bound or working full time. Since computers and the internet have continued to transform the global economy and society, the need for graduates with information and communication technologies skills has increased. The B.S. in Information and Communication Technologies offers a concentration in networking. The program offers a variety of distance education methods, opportunity to build on previously completed technical education, and preparation for management and leadership challenges. Students prepare for managerial and leadership opportunities, positioning them for new or changing opportunities in the workforce, increased salary potential and contribution to current employers. In addition, the program allows students to grow personally and professionally in their breadth and depth of knowledge of today's information technologies.

An A.A.S. or A.S degree in a field related to the major is desirable. To graduate from this program the student needs to complete a minimum of 32 credits from UW-Stout.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Studies	22 credits
Concentration, Minor or Elective Track	18-24 credits
Technical Specialty and/or Transfer	40 credits

### Program Requirements

## General Education

### 40 credits required

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics (*or higher*)
- XXX-XXX Natural sciences with Lab (4.00 cr.)
- *Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, history, literature, music appreciation, performing arts and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

#### Contemporary Issues (3 credits)

- ICT-103 Information and Communication Technologies

#### Social Responsibility and Reasoning (3 credits)

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

#### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Professional Studies

### 22 credits

- BUACT-206 Introduction to Financial Accounting
- BUINB-260 International Business
- BUMGT-304 Principles of Management *or*
- BUMKG-330 Principles of Marketing
- ICT-100 Introduction to Information and Communication Technologies
- ICT-305 Information Systems for Enterprise
- ICT-401 Information Technology Policy And Audit
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership

## Concentration, Minor, or Elective Track

### 18 credits

*Select one of the following categories:*

#### Elective Track (18 credits)

*Select 18 credits from the following courses or courses from the Network Concentration:*

- ICT-103 Information and Communication Technologies
- ICT-309 Collaborative Computing
- ICT-311 Information and Communication Technologies Analytics
- ICT-375 Web Production and Distribution
- ICT-405 Enterprise Technology Seminar
- ICT-449 Cooperative Education Experience
- ICT-475 Dynamic Web Technologies
- ICT-485 Search Engine Optimization
- ITM-133 Networking Fundamentals I
- ITM-134 Networking Fundamentals II

#### Network Concentration (18 credits)

- ITM-133 Networking Fundamentals I
- ITM-134 Networking Fundamentals II
- ITM-441 Scalable Internetworks
- ITM-443 Multi-Layer Switched Networks

Additional Courses:

*Take additional 300- and 400-level, 3-credit courses from the Elective Track.*

## Minor (18-24 credits)

*Select an ICT-approved minor. Curriculum available at [www.uwstout.edu/programs/minors](http://www.uwstout.edu/programs/minors).*

## Technical Specialty and/or Transfer

### 40 credits

*Select advise-approved ICT technical credits or transfer credits.*

## Information Technology Management, B.S.

Go to program website

### Introduction

The Information Technology Management program prepares graduates for leadership positions in a dynamic environment. Professionals in the field deal with a broad range of business and technical issues. The program emphasizes managerial, technical and science skill courses. The field of information technology requires application of scientific, business and technical principles together with appropriate knowledge, and supports research, marketing, design, and systems that integrate information technology.

Students apply theory to solve real-world problems in an intensive hands-on laboratory environment that is the heart of UW-Stout's teaching strategy. Emphasis is on areas of information technologies that include voice, data, and video systems.

Technical courses foster the development of understanding in systems creation, design, development, implementation, operations and management. Students take courses that provide the basic knowledge about the technical elements required in building any voice, data, and video network systems. Students completing this program have the opportunity to earn one or more of the following highly respected professional certifications: Cisco CCNA, CCDA, CCNP, CCDP, and Microsoft MCSE.

Professional studies provide a solid managerial background while humanities and social science courses introduce students to methods of communications, motivation, and supervising people. Math and physical science courses help in solving technical and economic problems found in business.

Several work experience programs have been developed. Internships, field experience, independent study and cooperative education opportunities are available. You can work for a summer or semester earning college credit as well as a salary, while gaining a personal perspective of the business and technical world of information technologies.

Information Technology Management program graduates advance into administrative and executive areas within an organization. The professional certifications earned give students a substantial competitive advantage when entering the job market.

### General Requirements

#### Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits

## Program Requirements

### General Education

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (12 credits)

- CS-144 Computer Science I
- MATH-153 Calculus I
- PHYS-211 Introduction to Physics
- PHYS-212 Introduction to Physics: Lab

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

#### Contemporary Issues (3 credits)

- ICT-103 Information and Communication Technologies

#### Social Responsibility and Ethical Reasoning (3 credits)

- ICT-215 Cybertechnology Ethics

## Selective (1 credit)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **80 credits required**

### Management (20 credits)

- BUACT-206 Introduction to Financial Accounting
- BUMGT-304 Principles of Management
- ENGL-415 Technical Writing
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership
- INMGT-475 Advanced Project Management
- SPCOM-308 Speech Skills for Business and Industry

### Technical (51 credits)

- CS-248 Web and Internet Programming
- ELEC-204 Electricity/Electronics Fundamentals
- ITM-133 Networking Fundamentals I
- ITM-134 Networking Fundamentals II
- ITM-330 IP Telephony Design & Implementation
- ITM-361 Workstation And Server
- ITM-362 Server Applications
- ITM-363 Directory Services
- ITM-382 Network Systems Design
- ITM-383 Introduction to Network Security
- ITM-391 Wireless Systems
- ITM-441 Scalable Internetworks
- ITM-443 Multi-Layer Switched Networks
- ITM-444 Internetwork Troubleshooting
- ITM-450 Enterprise Solutions and Unified Communications
- ITM-484 Advanced Network Security and Auditing
- ITM-490 Information Technology Management Capstone

### Electives (9 credits)

*Electives may be chosen from any courses with the following prefixes: BUXXX, CS, ELEC, INMGT, ICT, ITM, TRHRD, and STAT 320. ITM-449 Cooperative Education Experience is recommended. Minors and Specializations may require additional credits beyond program minimum.*



# Interior Design, B.F.A.

[Go to program website](#)

## Introduction

The Bachelor of Fine Arts (*BFA*) in Interior Design program prepares students for careers in interior design and related industries. Graduates of UW-Stout's program have careers in large corporations, architectural design firms as well as specialized interior design firms. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

Interior design courses integrate art, design and history to fully prepare interior design students to create meaningful, safe and lifeenhancing interior environments that contribute to the cultural, social and environmental well-being of society. The technical courses in the engineering and construction departments are supported by industry standard software and hardware. Interior design students have the opportunity to study internationally and pursue internships at regional and national firms.

A required mid-program portfolio review offers students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design courses are required for graduation.

## General Requirements Bachelor of Fine Arts Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## Program Requirements

### General Education

*40 credits required*

### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

*Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and one natural science course with a lab is required.*

## Arts and Humanities (6 credits)

- ARTH-223 Survey of Art--Ancient Through Medieval

## Additional Courses:

*Choose three additional credits from one or more areas including creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

- DES-150 Introduction to Sustainable Design and Development

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

Courses/credits may be selected from any category to meet the 40-credit requirement.

## Major Studies

*80 credits required*

## Studio and Related Requirements (47 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-200 Drawing II
- DES-214 Interior Design Practice, Materials and Finishes
- DES-200 Design Concepts and Problems
- DES-205 Design Drawing and Concept Visualization

- DES-220 Introduction To 2D Digital Imaging
- DES-303 Interior Design Studio 1
- DES-308 Lighting Design in the Built Environment
- DES-314 Interior Design Contracts and Codes
- DES-414 Interior Design Construction Documentation
- DES-415 Interior Design Studio 3
- DES-416 Interior Design Senior Studio
- DES-XXX Co-op or Field Experience (1.00 cr.)

### Art Studio Selective Requirements (12 credits)

- DES-320 Furniture Design

### Additional Courses:

*Course options include painting, ceramics, contemporary sculptural practices, metals, life drawing, printmaking or co-op experience.*

### Art History Requirements (9 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-319 History of Design
- ARTH-333 History of Interiors and Furnishings

### Technical Requirements (12 credits)

- AEC-131 Architectural Graphics
- AEC-171 Light Construction Methods and Materials
- AEC-233 Architectural Design I
- ENGR-134 Computer Assisted Design and Building Modeling Fundamentals

## Management, B.S.

Go to program website

### Introduction

The Bachelor of Science in Management program recognizes the need for lifelong learning by providing a degree completion opportunity for technical college graduates. Developed in response to placebound professionals' need for additional education, the program is a collaborative effort between the UW Colleges, Wisconsin Technical Colleges and UW-Stout.

The curriculum provides a sequence of management courses with concentrations in the management of business, industrial, service industries, quality and human resources allowing students the flexibility to choose the track that suits their personal and professional goals. Students prepare for managerial and leadership opportunities, building on previous technical education,

positioning themselves for new or changing opportunities in the workforce, increasing salary potential and contribution to current employers, and growing personally and professionally in breadth and depth of knowledge.

The program is scheduled for working professionals through evening and online class offerings, using a variety of distance education methods.

An Associate of Applied Science or Associate of Science degree in a technical field is suggested. Students should possess two or more years of technical work experience.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Technical Emphasis	40 credits
Major Studies	22 credits
Concentration	18 credits

## **Program Requirements**

### **General Education**

#### **40 credits required**

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

- STAT-130 Elementary Statistics
- MATH-118 Concepts of Mathematics
- CHEM-135 College Chemistry I *or*
- PHYS-211 Introduction to Physics and
- PHYS-212 Introduction to Physics: Lab

## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

- ECON-210 Principles of Economics I
- GEOG-251 Introduction to Geographic Information Systems
  
- CHEM-135 College Chemistry I  
or
- PHYS-211 Introduction to Physics  
and
- PHYS-212 Introduction to Physics: Lab

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses, which includes technology.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (2 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Technical Emphasis

*40 credits required*

*Because each student brings different qualifications as a result of prior training and experience, the student, with the assistance of the program director, will define all 40 technical credits in terms of student and job competency needs.*

## Major Studies

*22 credits required*

## Management Core (22 credits)

- BUACT-206 Introduction to Financial Accounting
- BUINB-260 International Business

- BUMGT-304 Principles of Management
- ENGL-415 Technical Writing
- INMGT-100 Introduction to Management
- INMGT-200 Production and Operations Management *or*
- INMGT-210 Service Operations Management
- INMGT-325 Quality Management
- INMGT-400 Organizational Leadership

## Concentrations

*18 credits required*

### Business Management (18 credits)

- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUFIN-340 Business Finance
- BULGL-318 Business Law I
- BUMGT-490 Strategic Management and Business Policy
- BUMIS-333 Management Information Systems - Decision Support Systems
- BUMKG-330 Principles of Marketing

### Human Resource Management (18 credits)

- INMGT-460 Industrial Management Capstone
- PSYC-382 Human Resource Management
- PSYC-403 Management of Employee Reward Systems
- PSYC-485 Recruitment & Selection of Human Resources
- RC-381 Principles of Occupational Risk Control/Safety
- TRHRD-360 Training Systems in Business and Industry

### Operations Management (18 credits)

- INMGT-300 Engineering Economy
- INMGT-305 Resource Planning and Materials Management
- INMGT-320 Quality Tools
- INMGT-365 Project Management
- INMGT-460 Industrial Management Capstone
- RC-381 Principles of Occupational Risk Control/Safety

### Project Management (18 credits)

- BULGL-318 Business Law I

- INMGT-365 Project Management
- INMGT-475 Advanced Project Management
- INMGT-300 Engineering Economy
- COM-XXX Negotiation
- INMGT-460 Industrial Management Capstone

## Quality Management (18 credits)

- INMGT-300 Engineering Economy
- INMGT-320 Quality Tools
- INMGT-365 Project Management
- INMGT-410 Six Sigma Quality Improvement Methods
- INMGT-420 Quality Assurance-Practicum
- INMGT-440 Lean Enterprise

## Manufacturing Engineering, B.S.

Go to program website

### Introduction

The Bachelor of Science degree program in Manufacturing Engineering is designed to prepare engineers as experts in the production process, from design through manufacturing. As a team member, the manufacturing engineer works with other professionals in the design of products, particularly from the point of view of the efficiency of production. They are responsible for selecting the right materials for various product applications and for determining methods used in processing raw materials into finished products. Using computers, they design and control automated systems capable of rapidly making the product. Manufacturing Engineers are part of the company's management team and make important decisions regarding production planning, inventory, scheduling and quality.

To be admitted to the B.S. in Manufacturing Engineering program, students must have graduated in the top 40 percent of their class or, for high schools that do not rank, have a cumulative grade point average of at least 3.0 on a 4.0 scale or receive a composite score of 22 or greater on the ACT or equivalent score or greater on the SAT (*ACT is preferred*). In addition, an ACT math score of at least 22 or equivalent score on the SAT is required.

Through intensive hands-on laboratory experience, which is the heart of UW-Stout's teaching strategy, the program emphasizes application of theory to solution of real world problems. Manufacturing Engineering students learn modern production tools, such as computer-aided design and manufacturing (*CAD/CAM*), robotics, programmable logic controllers, computer simulation of production environment and modern manufacturing management techniques. Students have opportunities to function as members of production teams as they practice concurrent product design, material selection, appropriate manufacturing method selection, and automated production systems design.

The UW-Stout Manufacturing Engineering degree is accredited by the Engineering Accreditation Commission of ABET. It is the only nationally accredited manufacturing engineering degree in Wisconsin. There are many opportunities for cooperative learning and internship experiences with regional companies, providing industrial experience and that extra "edge" when applying for jobs upon graduation.

### General Requirements Bachelor of Science Degree

Total for graduation	129 credits
General Education	40 credits
Major Studies	89 credits

## Program Requirements

### General Education

#### **40 credits required**

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (13 credits)

- CHEM-135 College Chemistry I
- MATH-153 Calculus I
- MATH-154 Calculus II

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

#### Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

#### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

#### Social Responsibility and Ethical Reasoning (3 credits)



*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Major Studies

*89 credits required*

### Mathematics and Basic Sciences (21 credits)

- CHEM-341 Chemistry of Materials
- STAT-330 Probability and Statistics for Engineering and the Sciences
- MATH-250 Differential Equations with Linear Algebra
- MECH-292 Dynamics
- PHYS-XXX Engineering Physics (5.00 cr.)
- PHYS-291 Statics

### Engineering Core (14 credits)

- ELEC-290 Circuits and Devices
- MECH-294 Mechanics of Materials
- MFGE-275 Thermodynamics & Heat Transfer
- MFGE-X49 Cooperative Experience (1.00 cr.)
- MFGT-150 Introduction to Engineering Materials

### Materials and Manufacturing Processes (15 credits)

- MFGE-351 Manufacturing Process Engineering I
- MFGE-352 Manufacturing Process Engineering II
- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes

### Process, Assembly and Product Engineering (12 credits)

- MFGE-405 Capstone I: Concurrent Design
- MFGE-441 Design Of Jigs, Fixtures, And Tooling
- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling

### Manufacturing Integration Methods and System Design (18 credits)

- MFGE-325 Computer Aided Manufacturing for Manufacturing Engineers
- MFGE-410 Capstone II: Manufacturing System Design
- MFGE-415 Machine Vision and Robotics

- MFGE-440 Manufacturing System Design and Simulation
- MFGE-363 Controls and Instrumentation

## Manufacturing Competitiveness (9 credits)

- INMGT-300 Engineering Economy
- INMGT-335 Lean Manufacturing Systems
- INMGT-422 Quality Engineering

## Marketing and Business Education, B.S.

Go to program website

### Introduction

Are you creative and like to direct and plan activities for others? Are you interested in enhancing your knowledge and skills to better express your passion for marketing and business? UW-Stout's Marketing and Business Education program combines all of these interests into one program.

The disciplines of marketing and business contribute significantly to the intellectual and career development of students in an age of innovation and invention. Graduates of the program will be prepared to teach in middle, secondary and eventually post-secondary classrooms. Graduates are also prepared to enter careers in business and industry that expand on their real-world experience.

The program is also offered with a distance option for geographically bound students seeking Career and Technical Education certification.

### General Requirements

#### Bachelor of Science

Total for graduation	120-138 credits
General Education	40 credits
Major Studies	80-98 credits

*Although it is not a requirement for graduation, students should be aware of the fact that they must acquire a minimum of 4,000 hours of occupational experience before they can be certified to teach Marketing in Wisconsin. Students enter the program with "pre-education" status. Earning a 2.75 or better grade point average and passing a required skills test will formally move them into the Marketing Education program.*

**Note:** Students are required to maintain a 2.75 grade point average throughout the marketing education program. Grade point of 2.0 (C) or better is required in each designated \* course prior to student teaching.

### Program Requirements

#### General Education

*40 credits required*

### Communication Skills\* (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-120 Introductory College Mathematics I (MATH 118 *or higher*)
- BIO-XXX *Biology Selective* (4.00 cr.)
- PHYS-XXX *Physics Selective* (2.00 cr.) *or*
- CHEM-XXX *Chemistry Selective* (2.00 cr.)

Note(s):

*Both Life and Physical Science courses (including one lab course) are required for teacher licensure.*

### Arts and Humanities (6 credits)

- LIT-XXX *Any Literature* (1.00-3.00 cr.)
- ART,MUSIC, THEA, or Creative/Performing Art (1.00-3.00 cr.)
- *(Remaining course must be from: Art History/Music appreciation, Creative/Performing Arts)*

### Social and Behavioral Sciences (6 credits)

- ECON-210 Principles of Economics I
- *Remaining course must be selected from areas including anthropology, geography, political science, psychology or sociology.*

### Contemporary Issues (3 credits)

- ICT-103 Information and Communication Technologies

### Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

### Selective (3 credits)

- ECON-215 Principles of Economics II

## Major Studies - On Campus

*80-98 credits*

### Professional Education

**Key:**

Business Administration Minor/Business Education Program ■

Marketing Education Program ▲

### Marketing Education Licensure (46 credits)

### Business Education Licensure (42 credits)

### Marketing Education with Business Education Licensure (51 credits)

- CTE-302 Principles of Career and Technical Education ▲
- CTE-360 Coordination of Work-based Learning (WBL) Programs ▲
- EDUC-303 Educational Psychology \*
- EDUC-326 Foundations of Education \*
- MBE-101 Introduction to Marketing and Business Education \*
- MBE-202 Supervision of MBE Career & Technical Student Organizations \*
- MBE-301 Marketing and Business Methods and Formative Assessment \*
- MBE-311 Marketing and Business Education Project Method \* ▲
- MBE-312 MBE Pre-Student Teaching
- MBE-401 Marketing Education Curriculum \* ▲
- MBE-409 Marketing Education - Student Teaching ▲
- MBE-411 Business Education Methods and Curriculum \* ■
- MBE-419 Business Education Student Teaching ■
- RDGED-382 Content Area Reading \*
- SPED-430 Inclusion of Students with Exceptional Needs \*

### Related Technical Courses

### Marketing Education Licensure (35 credits)

## Business Education Licensure (38 credits)

## Marketing Education with Business Education Licensure (47 credits)

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUINB-260 International Business *or*
- BUINB-485 International Marketing
- BULGL-318 Business Law I
- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- BUMKG-334 Professional Selling and Market Development ▲
- BUMKG-479 Marketing Research ▲
- ENGL-320 Business Writing
- FCSE-380 Consumer Economics ■
- ICT-303 Information & Communication Technologies Essentials ■
- MBE-365 Integrated Software Applications for Instruction ■
- MBE-366 Integrated Media Applications for Instruction ■
- MBE-355 Marketing and Business Seminar
- STAT-130 Elementary Statistics

## Major Studies - Distance Delivery

**80-98 credits**

## Professional Education

### Key:

Required for Business Education Licensure ▼

Required for Marketing Education Licensure ♦

Required for Business and Marketing Dual Licensure ‡

## Business Education Licensure w/CTE Core (43 credits)

## Marketing Education Licensure w/CTE Core (44 credits)

## Business and Marketing Dual Licensure w/CTE Core (46 credits)

- CTE-302 Principles of Career and Technical Education
- CTE-360 Coordination of Work-based Learning (WBL) Programs ♦ ‡

- CTE-405 Methods of Teaching Career and Technical Education
- CTE-440 Instructional Evaluation in Career and Technical Education
- CTE-438 Course Construction in Career and Technical Education
- EDUC-303 Educational Psychology
- EDUC-415 Classroom Management
- MBE-311 Marketing and Business Education Project Method
- MBE-312 MBE Pre-Student Teaching
- MBE-XXX Business Education Methods II ▼ ‡ (2.00 cr.)
- MBE-409 Marketing Education - Student Teaching ♦ ‡
- MBE-419 Business Education Student Teaching ▼ ‡
- RDGED-382 Content Area Reading
- SPED-430 Inclusion of Students with Exceptional Needs

## Related Technical Courses

### Marketing Education Licensure (32 credits)

### Business Education Licensure (35 credits)

### Marketing Education with Business Education Licensure (44 credits)

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUINB-260 International Business *or*
- BUINB-485 International Marketing
- BULGL-318 Business Law I
- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- BUMKG-334 Professional Selling and Market Development ♦ ‡
- BUMKG-479 Marketing Research ♦ ‡
- ENGL-320 Business Writing
- ECON-196 Personal Finance (3.00 cr.) *or*
- FCSE-380 Consumer Economics ▼ ‡
- ICT-303 Information & Communication Technologies Essentials ▼ ‡
- MBE-365 Integrated Software Applications for Instruction ▼ ‡
- MBE-366 Integrated Media Applications for Instruction ▼ ‡
- STAT-130 Elementary Statistics

### Selectives (2-8 credits)

*Choose from a list of selectives approved by the adviser.*

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a minimum grade of 2.00 (C) in MBE-101 Introduction to Marketing and Business Education
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

### Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

## Mechanical Engineering, B.S.

## Introduction

Mechanical Engineering Students will gain experience through hands on training at the University of Wisconsin - Stout. Mechanical Engineering is a diverse discipline that is involved with the design and manufacture of nearly everything from micro-scale objects to machine tools and airplanes. The mechanical engineering program at UW-Stout will prepare graduates for successful careers in the mechanical engineering related professions and other career paths. Students will be prepared for the Fundamentals of Engineering (FE) exam administered by the National Council of Examiners for Engineering and Surveying (NCEES) upon graduation.

## General Requirements Bachelor of Science Degree

Total for graduation	129 credits
General Education	40 credits
Major Studies	89 credits

## Program Requirements

### General Education

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 or
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 or
- ENGL-112 Freshman English--Honors II
- SPCOM-100 Fundamentals of Speech

#### Analytical Reasoning and Natural Sciences (13 credits)

- MATH-151 Calculus with Precalculus B or
- MATH-153 Calculus I
- MATH-154 Calculus II
- CHEM-135 College Chemistry I



## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology, and sociology.*

## Contemporary Issues (3 credits)

- ENGN-100 Impacts of Engineering

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses, which includes health, health education, and athletics.*

## Major Requirements

### Mathematics and Basic Sciences (21 credits)

- MATH-158 Calculus III
- MATH-250 Differential Equations with Linear Algebra
- STAT-330 Probability and Statistics for Engineering and the Sciences
- PHYS-282 University Physics II
- CHEM-341 Chemistry of Materials
- ENGN-3XX Computational Methods for Engineers

### Engineering Core (9 credits)

- ELEC-290 Circuits and Devices
- MFGE-363 Controls and Instrumentation
- ME-349 Cooperative Education Experience or
- ME-449 Cooperative Education Experience

### Engineering Graphics (6 credits)

- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling

## Engineering Mechanics (13 credits)

- PHYS-291 Statics
- MECH-292 Dynamics
- MECH-294 Mechanics of Materials
- ME-4XX System Dynamics

## Thermal and Fluid Sciences (9 credits)

- ME-390 Engineering Thermodynamics
- MFGE-391 Fluid Mechanics
- ENGN-3XX- Heat Transfer

## Materials and Manufacturing Processes (12 credits)

- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes
- MFGT-315 Metallurgy

## Competitive Manufacturing (2 credits)

- INMGT-300 Engineering Economy

## Design (10 credits)

- MECH-332 Mechanical Design
- ME-405 Capstone I Concurrent Design
- ME-410 Capstone II System Design

## Technical Electives (7 Credits)

- BIO-362 Advanced Physiology
- PHYS-327 Solid State Physics
- PHYS-329 Atomic and Nuclear Physics

*Any 400-level course with the following prefixes: MFGE, MFGT, PLE, CEE, CS, BIO, and CHEM*

## **Packaging, B.S.**

Go to program website

## Introduction

A packaging career today requires a thorough knowledge of materials, methods, design concepts, and machinery to develop and produce the packages that protect and preserve a product, help market the product and instruct the consumer in its proper use.

UW-Stout's Bachelor of Science degree program in Packaging prepares students for technical or management responsibilities in the packaging industry to meet these needs. The program places strong emphasis on the application of theory to strengthen problem solving abilities and challenges students by providing opportunities to solve "real" packaging industry problems in classroom/laboratory settings.

The trend in the packaging industry is to hire employees who can function in more than one area at career entry. UW-Stout's Packaging program recognizes this trend by offering the student several "emphasis" options which include course and laboratory work beyond the technical core of the program. This distinguishing feature allows students to draw on other well-recognized programs offered at UWStout: graphic arts, graphic design, food science, business and sales, quality and manufacturing, and packaging research and development.

With the quantity and variety of products produced in the world, it is easy to understand that packaging is a dynamic multibillion dollar industry in need of well-educated men and women. Graduates of the program are positioned advantageously for entry into the expanding and evolving packaging industry, as well as for further studies in the field of packaging.

## General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	43 credits
Major Studies	62 credits
Emphasis Area	15 credits

## Program Requirements

### General Education

*43 credits required*

### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (11 credits)

- CHEM-135 College Chemistry I
- MATH-153 Calculus I
- STAT-130 Elementary Statistics

## Arts and Humanities (6 credits)

- ART-101 Two-Dimensional Design Foundations

### Additional Courses:

*Choose 3 additional credits from one or more areas including art history, foreign language and culture, history, literature, music appreciation and philosophy.*

## Social and Behavioral Sciences (6 credits)

- ECON-201 General Economics
- ECON-210 Principles of Economics I

### Additional Courses:

*Choose 3 additional credits from one or more areas including anthropology, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (5 credits)

- PHYS-241 College Physics I *or*
- PHYS-281 University Physics I

## Major Studies

### **62 credits required**

- CMG-141 Cross-Media Graphics

- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling
- MFGT-251 Fundamentals of Plastics Materials and Processing
- PKG-150 Packaging Fundamentals
- PKG-210 Packaging Materials: Paper, Wood, Adhesives, and Metal
- PKG-220 Packaging Materials: Polymers and Glass
- PKG-250 Consumer Packaging Systems
- PKG-260 Distribution Packaging
- PKG-335 Packaging Machinery
- PKG-350 Packaging Design and Evaluation
- PKG-385 Medical Packaging
- PKG-490 Packaging Development
- PKG-495 Packaging Seminar
- PKG-X49 Cooperative Education Experience (3.00 cr.)

### Professional/Management (18 credits)

- ENGL-415 Technical Writing
- INMGT-200 Production and Operations Management
- INMGT-300 Engineering Economy
- INMGT-325 Quality Management
- INMGT-365 Project Management
- INMGT-400 Organizational Leadership

### Emphasis Area

*15 credits required*

*Select 15 credits from an emphasis area. See program director or adviser for approved emphasis areas and course listings. Course plan must be approved by Packaging program director. Current emphasis areas available include:*

- *Art Minor (Must apply through the School of Art and Design.)*
- *Business Administration Minor*
- *Food Technology*
- *International Studies*
- *Package Design, Research and Development*
- *Package Printing*
- *Packaging Machinery*
- *Plastics*
- *Project Management*
- *Quality Management Minor*
- *Supply Chain Management*
- *Sustainable Design and the Environment*

### **Plastics Engineering, B.S.**

Go to program website

## Introduction

The Bachelor of Science degree in Plastics Engineering is designed to prepare engineers as experts in the design and manufacturing of plastic components. Plastics engineers work with other professionals in the design of products, particularly to ensure efficiency and quality when manufacturing. First class testing and processing facilities allow plastics engineering students to learn how to setup, optimize and validate processes to meet high quality standards. Plastics engineers also work to design and program automated systems capable of manufacturing and assembling plastic products. Through advanced knowledge of plastics materials, engineering design rules, and computer simulation software, plastics engineers play a vital role in automotive and recreational vehicle components, medical devices, consumer electronics, and everything else made of plastic.

To be admitted to the program, students must have graduated in the top 40 percent of their class or, for high schools that do not rank, have a cumulative grade point average of at least 3.0 on a 4.0 scale, or receive a composite score of 22 or greater on the ACT or equivalent score or greater on the SAT (*ACT is preferred*). In addition, an ACT math score of at least 22 or equivalent score on the SAT is required.

UW-Stout's Plastics Engineering degree is accredited by the Engineering Accreditation Commission of ABET (*Accreditation Board for Engineering and Technology*). It is the only nationally accredited plastics engineering degree in the Midwest, and one of only two in the United States. Many opportunities exist for paid cooperative experience with local and regional companies, as well as national and international companies. These experiences are extremely beneficial when applying for full-time engineering positions, and are an essential component to the undergraduate plastics engineering experience at UW-Stout.

## General Requirements Bachelor of Science Degree

Total for graduation	129 credits
General Education	40 credits
Major Studies	89 credits

## Program Requirements

### General Education

**40 credits required**

### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (13 credits)

- CHEM-135 College Chemistry I
- MATH-153 Calculus I
- MATH-154 Calculus II

## Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be from the list of approved social responsibility and ethical reasoning courses.*

## Major Studies

*89 credits required*

## Mathematics and Basic Sciences (21 credits)

- CHEM-325 Chemistry of Polymers
- MATH-250 Differential Equations with Linear Algebra
- MECH-292 Dynamics
- PHYS-282 University Physics II
- PHYS-291 Statics
- STAT-330 Probability and Statistics for Engineering and the Sciences

## Engineering Core (17 credits)

- ELEC-290 Circuits and Devices
- MECH-294 Mechanics of Materials
- MFGT-150 Introduction to Engineering Materials
- MFGE-275 Thermodynamics & Heat Transfer
- PLE-349 Cooperative Education Experience

## Polymer/Plastic Materials, Processes, Analysis and Testing (21 credits)

- MFGT-250 Introduction to Plastics
- MFGT-341 Injection Molding Technology
- PLE-305 Extrusion Theory and Applications
- PLE-310 Injection Molding Theory, Design and Application
- PLE-340 Process Simulation and Analysis
- PLE-360 Testing and Analysis of Plastics
- PLE-420 Transport Phenomena for Plastics Engineers

## Product and Production System Design (21 credits)

- ENGGR-112 Engineering Graphics Fundamentals
- ENGGR-210 Engineering Graphics Using Solid Modeling
- MFGE-325 Computer Aided Manufacturing for Manufacturing Engineers
- MFGE-363 Controls and Instrumentation
- MFGE-415 Machine Vision and Robotics
- PLE-405 Capstone I: Process/Product Design
- PLE-410 Capstone II: Process/Product Development

## Engineering and Professional Competitiveness (9 credits)

- INMGT-300 Engineering Economy
- INMGT-335 Lean Manufacturing Systems
- INMGT-422 Quality Engineering

## Professional Communication and Emerging Media, B.S.

Go to program website

### Introduction

Professional Communication and Emerging Media is a rapidly growing profession. Development of new technologies has increased the demand for professionals who can clearly explain policies, products and services to clients and customers. UW-Stout's program integrates communication theory with coursework in a chosen applied field. Examples of applied fields include biomedical engineering, packaging, international studies, quality management, telecommunications, tourism, training and development, art and design, and business and management. Graduates of this program will have the skills to research, visualize, design, develop and oversee publication of both print and electronic documents.

Copy editing and preparation, multimedia or hypertext writing, and critical, technical and freelance writing courses prepare you to write clearly for specific audiences. In addition, courses in an applied field of your choice supply the strong technical background crucial to communicating complex ideas to different audiences. Elective courses give you the chance to explore other areas, such as photography or creative writing. All students will participate in a co-op, internship or practicum during the junior year.



## General Requirements

### Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Core	46 credits
Concentration	34 credits

## Program Requirements

### General Education

*40 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- STAT-130 Elementary Statistics (recommended)
- MATH-118 Concepts of Mathematics *or*
- MATH-120 Introductory College Mathematics I
- XXX-XXX Natural Science w/lab (4.00 cr.)
- *Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science with a lab are required.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Professional Core

**46 credits required** - *Technical Communication, Applied Journalism and Digital Humanities Concentrations*

- ENGL-121 Introduction to Professional Communication
- ENGL-125 Professional Writing Elements of Style
- ENGL-225 Editing Processes and Practices
- ENGL-247 Critical Writing
- ENGL-312 Transnational Professional Communication
- ENGL-340 The Structure of English
- ENGL-371 Rhetoric and Style: Strategies of Argumentation
- ENGL-385 Document Design
- ENGL-388 Writing for the Internet
- ENGL-425 Usability Design and Testing
- ENGL-471 Professional Communication Capstone
- PHIL-235 General Ethics
- SPCOM-312 Intercultural Communication
- XXX-XXX Foreign Language I (4.00 cr.)
- XXX-XXX Foreign Language II (4.00 cr.)

## Concentrations

*34 credits required*

### Technical Communication (34 credits)

- ENGL-215 Foundations of Technical Communication
- ENGL-349 Cooperative Education Experience *or*

- ENGL-437 Technical Writing Practicum
- ENGL-430 Writing for Content Management
- ENGL-435 Writing Technical Manuals
- SPCOM-414 Interviewing
- SPCOM-425 Informational Interviewing Skills for Professionals

Additional Courses:

*Choose an additional 6 credits from a list of approved Applied Field/Focus Area courses to fulfill the 34-credit requirement.*

### Applied Journalism (34 credits)

- ENGL-207 Writing for the Media
- ENGL-210 Journalism Practicum *or*
- ENGL-349 Cooperative Education Experience *or*
- ENGL-437 Technical Writing Practicum
- ENGL-218 Mass Communication: Effects of the Technology on Society
- ENGL-330 Feature Writing
- ENGL-350 Digital Storytelling
- ENGL-407 Seminar in Applied Journalism
- ENGL-418 Convergent Communication

Additional Courses:

*Choose an additional 15 credits from a list of approved Applied Field/Focus Area courses to fulfill the 34-credit requirement.*

### Digital Humanities (34 credits)

- CS-141 Introduction to Programming
- CS-248 Web and Internet Programming
- ENGL-335 Critical Approach to Digital Humanities
- ENGL-350 Digital Storytelling
- ENGL-480 Seminar in Digital Humanities
- ENGL-495 Digital Humanities Capstone (*repeated for 6 credits total*)

Additional Courses:

*Choose an additional 13 credits from a list of approved Applied Field/Focus Area courses to fulfill the 34-credit requirement.*

### Program Requirements for the Applied Communication Concentration (online)

## Professional Core

### **27 credits required**

- ENGL-121 Introduction to Professional Communication
- ENGL-125 Professional Writing Elements of Style
- ENGL-225 Editing Processes and Practices
- ENGL-247 Critical Writing
- ENGL-312 Transnational Professional Communication
- ENGL-385 Document Design
- ENGL-388 Writing for the Internet
- ENGL-425 Usability Design and Testing
- ENGL-471 Professional Communication Capstone

## Concentration Requirements

### *53 credits required*

- ENGL-207 Writing for the Media
- ENGL-215 Foundations of Technical Communication
- ENGL-330 Feature Writing
- ENGL-350 Digital Storytelling
- ENGL-430 Writing for Content Management

## Additional Courses:

*Choose an additional 38 applied credits from transfer courses, prior learning, and approved online offerings.*

## Psychology, B.S.

Go to program website

### **Introduction**

The B.S. in Psychology program at UW-Stout focuses on applying the science of psychology to helping people and solving real world problems.

In addition to traditional coursework in the major sub-fields of psychology, the program offers a unique variety of courses applying psychology to areas such as counseling, health, the workplace, the legal system, the environment, and consumer behavior. Students in the program have numerous opportunities to gain hands-on experience through applied course projects, research experiences, and field experiences. Faculty advisors guide students in developing a personal program plan centered on their individual needs and career goals.

Graduates finish the program with a strong foundation in psychology, analytical thinking and communication skills, which makes them attractive candidates for a wide variety of jobs and graduate programs.

## General Requirements

### Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	46-55 credits
Minor or second area of depth	13-22 credits
Additional Liberal Studies Requirement	6 credits
Electives	6 credits

Students must attain a minimum grade point average of 2.25 in required courses for the major and a minimum grade point average of 2.5 in other courses for the major.

## Program Requirements

### General Education

#### 40 credits required

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-120 Introductory College Mathematics I (*or more advanced*)
- STAT-130 Elementary Statistics (*or more advanced*)
- XXX-XXX *Any Natural Science with Lab* (4.00 cr.)
- *Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

### Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology
- *Select remaining courses from another area including anthropology, economics, geography, political science and sociology.*

### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses, which includes technology.*

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

**46-55 credits required**

### Required Courses (13 credits)

- PSYC-100 Psychology Seminar I-Foundations
- PSYC-190 Psychological Research Methods
- PSYC-290 Interpreting Psychological Research
- PSYC-300 Psychology Seminar II - Career Preparation
- PSYC-320 Psychology: Its History and Systems

### Psychology Domains (12 credits)

*Select at least one course from each domain:*

#### Learning and Cognition

- COGS-101 Cognitive Science I
- PSYC-330 Psychology of Learning
- PSYC-442 Cognitive Processes
- PSYC-451 Children's Learning

## Personality and Social Processes

- PSYC-270 Social Cognition and Behavior
- PSYC-340 Psychology of Individual and Group Differences
- PSYC-360 Personality Theories and Applications
- PSYC-470 Social Influence

## Biological Bases

- COGS-101 Cognitive Science I
- PSYC-333 Drugs and the Brain
- PSYC-391 Applied Psychophysiological Methods
- PSYC-432 Perception

## Developmental

- PSYC-251 Child Psychology
- PSYC-351 Children's Social Reasoning
- PSYC-352 Adolescent Psychology

## Applied (6 credits)

*Select 6 credits from the following:*

- COUN-405 Introduction to Basic Counseling Skills
- PSYC-120 Psychology of Adjustment
- PSYC-280 Forensic Psychology, Law and Ethics
- PSYC-281 Psychology for Sustainability
- PSYC-350 Culture and Psychology
- PSYC-355 Clinical and Counseling Psychology
- PSYC-361 Abnormal Psychology
- PSYC-370 Interpersonal Effectiveness Training
- PSYC-371 Introduction to Health Psychology
- PSYC-377 Consumer Psychology
- PSYC-381 Industrial/Organizational Psychology
- PSYC-382 Human Resource Management
- PSYC-403 Management of Employee Reward Systems
- PSYC-485 Recruitment & Selection of Human Resources

## Experiential/Capstone (6 credits)

*Select 6 credits from the following:*

- PSYC-X49 Cooperative Education Experience in Psychology (1.00-8.00 cr.)
- PSYC-X98 Psychology Field Experience (2.00 cr.)
- PSYC-390 Experimental Psychology
- PSYC-480 Individual Research Project I *and*
- PSYC-481 Individual Research Project II
- PSYC-X99 Independent Study (2.00-3.00 cr.)\*\*

Note(s):

*\*\*Must involve research and be approved by the advisor as meeting the requirement of this category.*

## Psychology Selectives

*See adviser for a list of approved selectives to fulfill the 120-credit requirement.*

## Minor or Second Area of Depth

*13-22 credits required*

*Students are expected to take a minor, specialization or self-planned concentration. The self-planned concentration allows students to select course work and learning experiences that relate to a particular area of interest, and must be planned with an adviser and approved by a committee of at least three persons designated by the Psychology Program Committee.*

## Additional Liberal Studies Requirements

### **6 credits required**

- XXX-XXX Any natural science (3.00 cr.)
- XXX-XXX Any approved writing courses (3.00 cr.)

## Electives

### **6 credits required**

*Select courses from major studies: psychology domains, applied or experiential/ capstone.*

## **Real Estate Property Management, B.S.**

Go to program website

## **Introduction**

The B.S. in Real Estate Property Management provides a comprehensive and challenging academic experience that prepares graduates to be leaders in the property management profession. Property management is the administration, operation, marketing, and maintenance of real property in order to achieve the objectives of the property's owner. Property managers are in a service



business and work closely with both the owners of the properties they manage and the tenants and residents who reside and work within these properties.

The field of property management is growing steadily because of three concurrent trends: (1) the simultaneous growth of the population and its requirements for space has increased the total number of all types of buildings, (2) a larger percentage of real estate is considered investment property and (3) there is increasingly wide acceptance of the fact that real estate management requires special training and education.

There is a growing sophistication and professionalism in the management of both residential and commercial property. A professional property manager has to possess a diverse skill set in the areas of finance, accounting, tenant and employee relations and laws affecting these properties. The degree program is designed to prepare students for this by drawing widely from courses in the disciplines of business, management, construction, service management, retail and hospitality.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Core Requirements	61 credits
Concentration	19 credits

## **Program Requirements**

### **General Education**

**40 credits required**

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

- MATH-118 Concepts of Mathematics or higher level
- STAT-130 Elementary Statistics
- *A natural science course with a lab is required.*

## Arts and Humanities (6 credits)

- *Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

## Social and Behavioral Sciences (6 credits)

- ECON-210 Principles of Economics I
- *Courses must be from two or more areas including anthropology, economics, geography, political science, psychology, and sociology.*

## Contemporary Issues (3 credits)

- *Courses must be selected from the list of approved contemporary issues courses, which includes technology.*
- ICT-103 Information and Communication Technologies is suggested.

## Social Responsibility and Ethical Reasoning (3 credits)

- *Courses must be selected from the list of approved social responsibility and ethical reasoning courses, which includes health, health education, and athletics.*

## General Education Selectives (3 credits)

- *Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Core Requirements

## Professional Studies

### **64 credits required**

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- ENGL-320 Business Writing
- GEM-311 Customer Experience Management
- HT-344 Hospitality and Tourism Marketing and Sales
- HT-391 Principles of Social Media Marketing Management
- HT-452 Hospitality Professionalism
- HT-454 Security and Risk Management for the Hospitality Industry
- HT-457 Hospitality Management Strategies
- PM-100 Introduction to Property Management
- PM-280 Hospitality Facilities Management

- PM-358 Ethical Decision Making in Property Management or
- PM-410 Issues in Multi-family Property Management
- PM-362 Real Estate Market Analysis and Investment Analysis
- PM-365 Principles of Real Estate
- PM-370 Principles of Property Management
- PM-371 Commercial/Residential Property Development and Management
- PM-381 Marketing and Leasing Commercial and Residential Property
- PM-391 Real Estate Appraisal
- PM-430 Real Estate Law
- PM-449 Cooperative Education Experience
- PM-470 Seminar In Property Management
- PSYC-382 Human Resource Management

## Concentrations

### 18-19 credits

*Students may choose from a list of approved selectives or complete a concentration.*

### Construction (18 credits)

- AEC-131 Architectural Graphics
- AEC-171 Light Construction Methods and Materials
- AEC-190 Orientation to Construction Industry
- AEC-237 Architectural Technology
- AEC-352 Building Mechanical Systems
- AEC-370 Construction Estimating I

### Hotel, Restaurant, Tourism Management (18 credits)

- HT-235 Lodging Systems
- HT-330 Resort Planning and Operation
- HT-335 Lodging Operations Management
- HT-374 Principles of Timeshare Management
- HT-383 Yield Management
- HT-430 Lodging Administration

### Business Retail (19 credits)

- BURTL-105 Introduction to Retail Merchandising & Management
- BURTL-127 Basic Merchandising
- BURTL-212 Trend Tracking and Forecasting
- BURTL-390 Merchandise Planning and Control
- BURTL-327 Store Management

- BURTL-329 Retail Promotions
- BURTL-425 Current Retail Strategies for a Differential Advantage

## Program Selectives (16 credits)

Select courses from the following list.

- AEC-171 Light Construction Methods and Materials
- BUFIN-340 Business Finance
- BULGL-318 Business Law I
- BUMGT-480 Entrepreneurship: Small Business Planning
- ECON-215 Principles of Economics II
- HT-330 Resort Planning and Operation
- HT-335 Lodging Operations Management
- HT-350 Hospitality Diversity Management
- HT-374 Principles of Timeshare Management
- HT-460 Hospitality Industry Law and Liability
- INMGT-350 Facilities Planning
- INMGT-365 Project Management
- PM-X49 Cooperative Education Experience
- POLS-220 State And Local Government
- SPCOM-236 Listening
- SPCOM-312 Intercultural Communication
- SRVM-111 Introduction to Global Service Management-HT
- AEC-XXX
- BUMGT-XXX
- BURTL-XXX
- HRTM-XXX
- INMGT-XXX
- International Experience
- TRHRD-360 Training Systems in Business and Industry

## Retail Merchandising and Management, B.S.

[Go to program website](#)

### Introduction

The Retail Merchandising and Management program is designed to prepare graduates for leadership roles in corporate, regional or store-level management positions in the retail industry and support areas. Students explore the functional areas of retailing, including marketing, promotions, human resources, accounting, buying, merchandising, sourcing and logistics. They also sharpen their skills in analytical reasoning, critical thinking, problem-solving, oral and written communications. A minor in Business Administration can also be earned within the program requirements. A highlight of the program is the senior-level retail practicum or co-op/internship in which students work in management-level positions in retailing. Numerous opportunities are available for travel and study abroad experiences to enhance the educational programming.

Graduates of this program are prepared for entry-level managerial positions in merchandise buying, planning and management; store management and operations; training; human resources and e-commerce. Although specific job titles vary by organization, graduates of the program have been recruited to fill such positions as business analyst, executive team lead, sourcing specialist, department manager, assistant store manager, manager trainee, assistant buyer, pricing analyst, unit development leader, retail operations manager and visual merchandising/space management planner.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Professional Studies	40-41 credits
Concentration	39-40 credits

## **Program Requirements**

### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

*At least one mathematics or statistics course and a natural science course with a lab are required. MATH 123 required for Buying concentration. MATH 120, MATH 121, or MATH 123 required for Store Operations Management Concentration. STAT 130 recommended prerequisite for BUMKG 479.*

#### **Arts and Humanities (6 credits)**

Courses must be from two different areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

#### **Social and Behavioral Sciences (6 credits)**

- ECON-210 Principles of Economics I
- GEOG-104 World Geography (*Required for Buying Concentration*)

Note(s):

*Other concentrations choose 3 additional credits from areas including anthropology, geography, political science, psychology and sociology.*

### Contemporary Issues (3 credits)

Courses must be selected from the list of approved contemporary issues courses. ICT 103 required for Buying concentration.

### Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

### Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Professional Studies

### **40-41 credits required**

Students must complete 500 hours of approved and verified retail work experience. Overall 2.0 GPA required for graduation. Required and Selective courses cannot be taken for credit/no credit. BURTL-449 Cooperative Education Experience cannot be taken during last session/term before graduation.

- BUACT-206 Introduction to Financial Accounting
- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- BURTL-105 Introduction to Retail Merchandising & Management
- BURTL-127 Basic Merchandising
- BURTL-329 Retail Promotions
- BURTL-390 Merchandise Planning and Control
- BURTL-425 Current Retail Strategies for a Differential Advantage
- BUSCM-338 Principles of Logistics
- ECON-215 Principles of Economics II

### Writing Selective (3 credits)

*Select one course:*

- ENGL-320 Business Writing
- ENGL-415 Technical Writing

## Senior Capstone Selective (3-4 credits)

*Select both practicum courses or the co-op experience.*

- BURTL-450 Retail Practicum I *and*
- BURTL-451 Retail Practicum II
  
- BURTL-449 Cooperative Education Experience

## Advanced Marketing Selective (3 credits)

*Select one course:*

- BUMKG-350 Digital Marketing Strategy and Practice
- BUMKG-385 Target Marketing
- BUMKG-479 Marketing Research

## International Selective (3 credits)

*Select one course:*

- BUINB-260 International Business (*required for Buying Concentration*)
- BUINB-367 International Management (*required for HRM Concentration*)
- BUINB-485 International Marketing
- BURTL-319 International Economic Trends in Textiles and Clothing

## Concentrations

**39-40 credits required**

### Buying and Product Management (39-40 credits)

- APRL-167 Textiles I: Theory, Fibers and Structures
- APRL-272 Quality Analysis of Sewn Products
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUMIS-333 Management Information Systems - Decision Support Systems
- BURTL-212 Trend Tracking and Forecasting
- BURTL-395 Assortment Planning
- BURTL-490 Advanced Merchandise Planning Control

Select one course (3 credits) from each of the following areas:

Management Selective:

- BURTL-327 Store Management
- INMGT-400 Organizational Leadership
- PSYC-382 Human Resource Management

Problem-Solving Selective:

- ENGL-247 Critical Writing
- LOG-250 Critical Thinking
- LOG-301 Introduction to Logical Thinking

Product Management Selective:

- APRL-250 Textiles II: Evaluation
- ICT-311 Information and Communication Technologies Analytics

Sourcing Selective:

- BUSCM-437 Procurement, Sourcing and Supply Chain Management
- BURTL-319 International Economic Trends in Textiles and Clothing
- INMGT-305 Resource Planning and Materials Management

Electives (6-7 credits)

*See adviser for list of approved courses.*

Fashion Marketing (39-40 credits)

- APRL-167 Textiles I: Theory, Fibers and Structures
- APRL-272 Quality Analysis of Sewn Products
- BURTL-212 Trend Tracking and Forecasting
- BURTL-327 Store Management
- BURTL-229 Visual Merchandising
- BURTL-417 Social/Psychological Aspects of Clothing
- PSYC-382 Human Resource Management

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:



- SPAN-121 Practical Spanish I
- SPAN-122 Practical Spanish II
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II
- SPAN-XXX *Other SPAN course with approval.*

Diversity Selective:

- INMGT-415 Inclusivity in Leadership
- PSYC-340 Psychology of Individual and Group Differences
- PSYC-372 Psychology of Sex and Gender
- SOC-275 Sociology of Gender Roles
- SOC-375 Sociology of Minority Groups
- SPCOM-312 Intercultural Communication
- XXX-XXX *Other diversity course with approval.*

Leadership Selective:

- TRHRD-360 Training Systems in Business and Industry
- INMGT-400 Organizational Leadership
- INMGT-430 Employee Involvement: Work Teams
- INMGT-416 People Process Culture
- MSL-101 Leadership and Personal Development
- MSL-102 Basic Leadership
- XXX-XXX *Other leadership course with approval.*

Electives (8-13 credits)

BUACT-207 Introduction-Corporate and Managerial Accounting *is suggested for Business Minor requirement completion.*

Human Resource Management (39-40 credits)

- BURTL-327 Store Management
- INMGT-400 Organizational Leadership
- PSYC-379 Public Relations
- PSYC-382 Human Resource Management
- PSYC-403 Management of Employee Reward Systems
- PSYC-485 Recruitment & Selection of Human Resources
- SPCOM-414 Interviewing
- TRHRD-360 Training Systems in Business and Industry

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:

- SPAN-121 Practical Spanish I
- SPAN-122 Practical Spanish II
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II
- SPAN-XXX *Other SPAN course with approval.*

Diversity Selective:

- INMGT-415 Inclusivity in Leadership
- PSYC-340 Psychology of Individual and Group Differences
- PSYC-372 Psychology of Sex and Gender
- SOC-275 Sociology of Gender Roles
- SOC-375 Sociology of Minority Groups
- SPCOM-312 Intercultural Communication
- XXX-XXX *Other diversity course with approval.*

Leadership selective:

- INMGT-416 People Process Culture
- INMGT-430 Employee Involvement: Work Teams
- MSL-101 Leadership and Personal Development
- MSL-102 Basic Leadership
- XXX-XXX *Other leadership course with approval.*

Electives (8-13 credits)

BUACT-207 Introduction-Corporate and Managerial Accounting *is suggested for to complete a Business Minor. An experiential course is suggested to complete a Human Resource Management Minor.*

Store Operations Management (39-40 credits)

- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUMIS-333 Management Information Systems - Decision Support Systems
- BURTL-229 Visual Merchandising
- BURTL-327 Store Management
- INMGT-400 Organizational Leadership
- PSYC-382 Human Resource Management
- SPCOM-414 Interviewing

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:

- SPAN-121 Practical Spanish I
- SPAN-122 Practical Spanish II
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II
- SPAN-XXX *Other SPAN course with approval.*

Diversity Selective:

- INMGT-415 Inclusivity in Leadership
- PSYC-340 Psychology of Individual and Group Differences
- PSYC-372 Psychology of Sex and Gender
- SOC-275 Sociology of Gender Roles
- SOC-375 Sociology of Minority Groups
- SPCOM-312 Intercultural Communication
- XXX-XXX *Other diversity course with approval.*

Leadership Selective:

- TRHRD-360 Training Systems in Business and Industry
- INMGT-430 Employee Involvement: Work Teams
- INMGT-416 People Process Culture
- MSL-101 Leadership and Personal Development
- MSL-102 Basic Leadership
- XXX-XXX *Other leadership course with approval.*

Problem-Solving Selective:

- ENGL-247 Critical Writing
- LOG-250 Critical Thinking
- LOG-301 Introduction to Logical Thinking

Electives (7-10 credits)

*See adviser for list of approved courses.*

## **Science Education, B.S.**

Go to program website

## **Introduction**

The B.S. in Science Education program at UW-Stout prepares students for a career in teaching science at the middle school and secondary levels. To complete the program, students are required to take general education courses, science courses, professional education courses, and several field experiences.

Students choose a science teaching major certification in broadfield science, biology, chemistry, or physics and a science teaching minor certification in biology, chemistry, earth and space science, environmental science, or physics. The science teaching major certifications require 28 credits of science, and the science teaching minor certifications require 18 credits of science. These courses include required and elective science courses to provide students with flexibility in pursuing a wide variety of courses in each science discipline.

The broadfield science major certification includes courses in biology, chemistry, physics, and earth science. It certifies teachers to teach any science course from grades five through ten. To teach eleventh and twelfth grade courses in biology, chemistry, or physics, science teachers must be certified in those specific subject areas with either a major or minor certification. The broadfield science major certification is recommended for those teachers most interested in teaching at the middle school level. It can also be advantageous at very small high schools where science teachers teach many different science courses.

Science teaching is a highly rewarding career that is also a high demand profession. For a successful career in science teaching, you should have an aptitude for helping others and a love of science. According to the National Education Association (*NEA*) and Wisconsin Department of Public Instruction (*DPI*), there is currently a national and state wide shortage of science teachers. Completing a BS in Science Education degree at UW-Stout will lead to a rewarding career and valuable contribution to individuals and society.

## General Requirements

### Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## Program Requirements

### General Education

#### 40 credits required

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I *or*
- SPCOM-100 Fundamentals of Speech

## Analytic Reasoning and Natural Sciences (10 credits)

- MATH-153 Calculus I
- STAT-320 Statistical Methods
- XXXX-XXX Any *physical science* (*PHYS, CHEM*) (3.00 cr.)

## Arts and Humanities (6 credits)

- LIT-XXX Any *Literature* (3.00 cr.)
- XXX-XXX Any *Creative/Performing Arts* (1.00-3.00 cr.)

## Additional Courses:

*Choose additional courses from areas including art history, foreign language and culture, history, music appreciation, and philosophy.*

## Social and Behavioral Sciences (6 credits)

- ANTH-220 Cultural Anthropology
- PSYC-110 General Psychology

## Contemporary Issues (3 credits)

- BIO-111 Science, the Environment and Sustainability

## Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

## Selective (3 credits)

BIO 111 provides 1 credit; choose 2 additional credits from any general education area.

## Major Studies

**80 credits required**

## Professional Education (24 credits)

- EDUC-303 Educational Psychology \*
- EDUC-326 Foundations of Education \*
- RDGED-382 Content Area Reading \*

- SPED-430 Inclusion of Students with Exceptional Needs \*
- STMED-101 Introduction to Math and Science Education \*
- STMED-185 Pre-Student Teaching
- STMED-260 Curriculum Methods & Assessment for Science & Technology \*
- STMED-360 Pre-Student Teaching in Science Technology and Math Education
- STMED-390 Laboratory and Classroom Management in Science and Technology \*
- STMED-401 Capstone: Math and Science Education
- STMED-460 Teaching Methods for Science and Technology Education \*

### Student Teaching/Internship (16 credits)

*Select 16 credits of student teaching or teaching internship from approved list.*

- SCIED-XXX *Student Teaching* (16.00 cr.)

### Science Courses (40 credits)

*Students must complete a least one major certification and one different **major** or **minor** certification.*

#### Broadfield Science: Major Certification (28 credits)

- BIO-135 Organismal Biology \*
- CHEM-135 College Chemistry I \*
- CHEM-136 College Chemistry II
- PHYS-241 College Physics I \*
- PHYS-242 College Physics II
- PHYS-255 Meteorology \*
- PHYS-258 Introduction to Geology \*

#### Biology: Major Certification (28 credits)

- BIO-135 Organismal Biology \*
- BIO-136 College Molecular Cell Biology I

#### Chemistry: Major Certification (28 credits)

- CHEM-135 College Chemistry I \*
- CHEM-136 College Chemistry II
- CHEM-201 Organic Chemistry I
- CHEM-331 Quantitative Analysis
- *Additional 11 credits of chemistry above the introductory level.*

#### Physics: Major Certification (28 credits)

- ELEC-260 Electrical Circuits
- PHYS-151 Astronomy
- PHYS-241 College Physics I \*
- PHYS-242 College Physics II
- *Additional 12 credits of physics above the introductory level.*

#### Biology: Minor Certification (18 credits)

- BIO-135 Organismal Biology \*
- BIO-136 College Molecular Cell Biology I
- *Additional 9 credits of biology above the introductory level.*

#### Chemistry: Minor Certification (18 credits)

- CHEM-135 College Chemistry I \*
- CHEM-136 College Chemistry II
- *Additional 8 credits of chemistry above the introductory level.*

#### Earth and Space Science: Minor Certification (18 credits)

- PHYS-151 Astronomy
- PHYS-255 Meteorology
- PHYS-258 Introduction to Geology
- PHYS-358 Soil Science and Conservation
- GEOG-251 Introduction to Geographic Information Systems
- *Additional 3 credits of approved earth and space science electives.*

#### Environmental Science: Minor Certification (18 credits)

- BIO-242 Botany
- BIO-351 Ecology Laboratory
- PHYS-258 Introduction to Geology
- PHYS-358 Soil Science and Conservation
- *Additional 3 credits of approved environmental science electives.*

#### Physics: Minor Certification (18 credits)

- PHYS-241 College Physics I \*
- PHYS-242 College Physics II
- *Additional 8 credits of physics above the introductory level.*

Note(s):

*\* Student must earn a "C" or better in all professional education and introductory science courses.*

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a minimum grade of 2.00 (C) in STMED-101 Introduction to Math and Science Education course
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/benchmarks.cfm](http://www.uwstout.edu/soe/current/benchmarks.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (Praxis II)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (TB) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

### Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/benchmarks.cfm](http://www.uwstout.edu/soe/current/benchmarks.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

## Special Education, B.S.

Go to program website



## Introduction

The B.S. in Special Education prepares teachers to be reflective practitioners who demonstrate knowledge, skills and dispositions relative to planning and preparation, the classroom environment, instruction, and professional responsibilities. The UW-Stout framework is compatible with the national Council for Exceptional Children (CEC) knowledge and skill base for all beginning special education teachers. Special education is founded on the philosophy of advocacy for persons with exceptionalities and their families, and of embracing and teaching to individual differences and needs. Special educators must know the characteristics of the learners they serve, possess the skills to design effective interventions and the dispositions to practice within the standards established by CEC.

Curriculum of the program prepares teachers of students with cognitive, emotional/behavioral, and learning disabilities. Graduates of the program will be prepared to work with students with CD, E/ BD, and LD, with an emphasis on Cognitive Disabilities. Graduates of the program will be prepared to work at the early childhood through middle childhood level and the early adolescence through adolescence level.

## General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	44 credits
Major Studies	76 credits

Students must demonstrate proficiency in American Red Cross First Aid procedures, either by verifying current certification with their adviser, or by satisfactory completion of HLTH-340 ARC Standard First Aid and Personal Safety (*adding 1 credit to the program credit total*).

## Program Requirements

### General Education

#### 44 credits required

#### Communication Skills\* (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-118 Concepts of Mathematics (*or more advanced*)\*
- STAT-130 Elementary Statistics \*
- BIO-XXX Any approved biology w/lab (4.00 cr.)

## Arts and Humanities (6 credits)

- LIT-XXX Any Literature (3.00 cr.)

*Remaining courses must be from areas including art history, music appreciation, creative arts or performing arts. (No more than one class at the 100 level.)*

## Social and Behavioral Sciences (6 credits)

- POLS-210 American Government \*
- PSYC-110 General Psychology

## Contemporary Issues (3 credits)

*Courses must be from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

- PHIL-235 General Ethics

## Selectives (7 credits)

- HIST-210 Modern World *or*
- ANTH-220 Cultural Anthropology
- CHEM-XXX Chemistry *or*
- PHYS-XXX Physics (4.00 cr.)

## Major Studies

*76 credits required*

## Professional Education Core\* (17 credits)

- EDUC-303 Educational Psychology \*
- EDUC-326 Foundations of Education \*
- EDUC-330 Multiculturalism: Dialogue and Field Experience
- EDUC-415 Classroom Management \*\*
- RDGED-382 Content Area Reading \*\*
- RDGED-414 Literacy Instruction and Assessment in the Primary Grades \*\*

## Major Studies\* (59 credits)

- SPED-100 Introduction to Special Education
- SPED-300 Introduction to Individuals with Cognitive Disabilities
- SPED-301 Learning Disabilities
- SPED-322 Curriculum & Instruction: Severe Disabilities \*\*
- SPED-323 Mild Disabilities: Social Studies and Science \*\*
- SPED-324 Curriculum & Instruction: Career & Transition Education \*\*
- SPED-326 Pre-Student Teaching: Cognitive Disabilities \*\*
- SPED-328 Assessment for Individual Education/ Transition Plans \*\*
- SPED-330 Introduction to Communication Disorders
- SPED-338 Pre-Student Teaching Children/Youth with Disabilities \*\*
- SPED-420 Schools, Families and Community Collaboration \*\*
- SPED-440 Diagnosis and Remediation of Literacy and Math Disabilities \*\*
- SPED-447 Emotional and Behavioral Problems of Children and Adolescents
  
- SPED-481 Student Teaching: Special Education \*\* *or*
- SPED-488 Intern Teaching: Special Education \*\*
  
- SPED-490 Behavioral Interventions in the Schools \*\*
  
- PSYC-251 Child Psychology *and*
- PSYC-352 Adolescent Psychology *or*
- HDFS-255 Lifespan Human Development

### Note(s):

*\* Required courses with a grade point of 2.0 (C) or better. Courses in which a student earns less than the required 2.0 must be retaken and at least a 2.0 earned prior to student teaching.*

*\*\* Benchmark I completed and Admission to the School of Education required prior to enrollment*

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100

- Earn a minimum grade of 2.00 (C) in SPED-100 Introduction to Special Education course
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

## Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete electronic portfolio
- Receive satisfactory portfolio assessment by faculty
- Pass Content Knowledge Exam
- Receive clearance through an updated background check
- Attain a 2.75
- Complete a satisfactory tuberculosis test
- Submit copies of resume to the School of Education prior to student teaching
- Complete Application for Student Teaching form

## Benchmark III: Program completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at three levels: infant/toddler/preschool, kindergarten and primary.
- Receive a satisfactory student teaching assessment

## Studio Art, B.F.A.

Go to program website

### Introduction

The Bachelor of Fine Arts in Studio Art will prepare students to apply knowledge, techniques and methods necessary to become a successful studio artist. Students can pursue a concentration in one of six studio art disciplines: art metals, ceramics, contemporary sculptural practices, drawing, painting and printmaking. The curriculum provides students with experiences in studio work, art history, professional studies and general education. An understanding of liberal studies, art history, the present status of art and design, and an inquisitive attitude toward experimentation in problem-solving will elevate students to a professional level in studio art or in their selected concentration.

Experienced art and design faculty ensure current course content and serve as advisers to the students in respective areas. A required mid-program portfolio review offers students an overview of their progress in the major. Extensive library resources and the art and design department visual resource center are significant assets. A variety of international study abroad opportunities allow students experience with other cultures. Internship and cooperative education opportunities supplement educational theory and practice in a setting with working professionals. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. Students must present an exhibition of their work during their senior year.

## General Requirements

### Bachelor of Fine Arts Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	65 credits
Concentration Studio Requirements	15 credits

## Program Requirements

### General Education

*40 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (10 credits)

*Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.*

- BIO-XXX Human Biology (*for Drawing concentration*) (4.00 cr.)

#### Arts and Humanities (6 credits)

- ARTH-223 Survey of Art--Ancient Through Medieval
- ENGL-245 Creative Writing \*

Note(s):

*\* for Painting concentration*

*\*\* for Contemporary Sculptural Practices, Art Metals, and Drawing concentrations.*

## Social and Behavioral Sciences (6 credits)

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

*65 credits required*

## Studio and Related Requirements (41 credits)

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-103 Three-Dimensional Design Foundations
- ART-145 The Practice of Art
- ART-200 Drawing II
- ART-209 Painting I
- ART-211 Contemporary Sculptural Practices I
- ART-213 Ceramics I
- ART-215 Art Metals I
- ART-217 Printmaking I
- ART-301 Life Drawing I
- ART-307 Aesthetics in the Studio
- ART-397 Field Experience for Artists
- ART-445 Senior Seminar
- ART-490 BFA Thesis Exhibition
- DES-220 Introduction To 2D Digital Imaging

## Art Studio Selectives (9-12 credits)

*Select additional studio experience from ART or DES courses. Six credits must be from outside the studio emphasis.*

## Art History Requirements (12-15 credits)

- ARTH-224 Survey of Art-Renaissance Through 20th Century

#### Additional Courses:

*Select remaining Art History courses with at least 3 credits from Modern Art History.*

### Concentration Studio Requirements

*15 credits required*

#### Art Metals Concentration (15 credits)

- ART-315 Art Metals II
- ART-415 Art Metal III (*repeatable*)

#### Art Studio Selectives

*Take one color-based course and one drawing-based course.*

#### Ceramics Concentration (15 credits)

- ART-413 Ceramics II

#### Contemporary Sculptural Practices Concentration (15 credits)

- ART-311 Contemporary Sculptural Practices II
- ART-411 Contemporary Sculptural Practices III (*repeatable*)
- PHOTO-330 Introduction to Video Production

#### Drawing Concentration (15 credits)

- ART-300 Drawing III (*repeatable*)
- ART-401 Life Drawing II (*repeatable*)
- DES-205 Design Drawing and Concept Visualization

#### Painting Emphasis (15 credits)

- ART-409 Painting II
- ART-410 Painting III (*repeatable*)

#### Printmaking Concentration (15 credits)

- ART-417 Printmaking II (*repeatable*)

### Additional Courses:

Students take ART 417 (topics may rotate) and one course in each of the following printmaking techniques, plus two additional courses, for a total of 15 credits.

- Lithography (3.00 cr.)
- Serigraphy (3.00 cr.)
- Relief Printmaking (3.00 cr.)

## Supply Chain Management, B.S.

Go to program website

### Introduction

The Bachelor of Science Degree in Supply Chain Management will prepare students for a career in the supply chain profession by providing specialized training in an increasingly complex and highly technical field. The program integrates selected areas of engineering, business, management, operations, and processes.

The supply chain encompasses the flow of products and information across all companies from the lowest level supplier through the end customer. Supply Chain Managers focus on designing, managing, integrating and optimizing financial and operational performance of the supply chain. Key activities include: launching products, forecasting demand, managing inventory, sourcing suppliers, processing customer orders, planning and ordering materials, scheduling labor, materials and equipment, lean manufacturing, managing quality, managing logistics and transportation, warehousing, spare parts, and returns.

The program addresses knowledge, skills, and applied research essential to supply chain management, including instruction to improve customer service, minimize costs, improve quality as well as the application of best practices and the effective use of technology. Students participate in hands-on, capstone courses and internships to provide experiential learning. Efficient management of the supply chain is critical to the success of a company. Graduates find their skills to be in high demand.

### Admission to the Program

Students may be admitted directly to the program, or if they do not meet at least one of the requirements below, may be accepted as Pre- Supply Chain Management. Students admitted in Pre-Supply Chain Management will remain until they meet the admission requirements. .

- **Program Director Approval**
- **Supply Chain Management**  
Students must have a composite ACT score of 22 or higher and ACT Math sub score of 22 or higher,  
*or*  
Students must have a cumulative GPA of 3.0 or higher, including transfer credits, and completion of a minimum of 54 credits in the B.S. Supply Chain Management Program Plan Sheet.
- **Pre-Supply Chain Management**  
Students will be admitted into the Pre-Supply Chain Management program until the above requirements are met. At that time, the student may apply for admission into the B.S. Supply Chain Management degree program.



## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Core Requirements	80 credits

## **Program Requirements**

### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (11 credits)**

- MATH-121 Introductory College Mathematics II *or*
- MATH-123 Finite Mathematics with Applications
- STAT-130 Elementary Statistics
- CHEM-135 College Chemistry I

#### **Arts and Humanities (6 credits)**

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

#### **Social and Behavioral Sciences (6 credits)**

- ECON-210 Principles of Economics I
- GEOG-104 World Geography

## Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selective (2 credits)

*Course/credit may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **80 credits required**

#### Business and Management Core (31 credits)

- BUSCM-100 Introduction to Supply Chain Management *or*
- BUMGT-100 Introduction to Business Administration
  
- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting
- BUACT-312 Cost Accounting
- BULGL-318 Business Law I
- BUMKG-330 Principles of Marketing
- BUMIS-333 Management Information Systems - Decision Support Systems
- BUFIN-340 Business Finance
- BUMGT-304 Principles of Management
- INMGT-400 Organizational Leadership
  
- ENGL-320 Business Writing *or*
- ENGL-415 Technical Writing

#### Supply Chain Management Core (49 credits)

#### Engineering, Operations and Processes (37 credits)

- ENGGR-112 Engineering Graphics Fundamentals
- MFGT-150 Introduction to Engineering Materials
- INMGT-200 Production and Operations Management
- INMGT-305 Resource Planning and Materials Management
- INMGT-320 Quality Tools
- INMGT-325 Quality Management

- INMGT-365 Project Management
- INMGT-440 Lean Enterprise
- BUSCM-338 Principles of Logistics
- BUSCM-341 International Supply Chain Modeling (1.00 cr.)
- BUSCM-437 Procurement, Sourcing and Supply Chain Management
- BUSCM-458 Negotiation and Contracts
- *Select one of the following:*
- MFGT-251 Fundamentals of Plastics Materials and Processing
- MFGT-252 Material Removal and Forming Processes
- MFGT-253 Joining and Casting Processes
- POWER-260 Introduction to Fluid Power
- ELEC-204 Electricity/Electronics Fundamentals

### Capstone Core (10 credits)

- INMGT-405 Resource Planning and Materials Management Practicum
- BUSCM-460 Supply Chain Management Design I Capstone
- BUSCM-461 Supply Chain Management Design II Capstone
- BUSCM-XXX Co-op or Internship (1.00 cr.)

### Supply Chain Selectives (2 credits)

- RC-381 Principles of Occupational Risk Control/Safety
- TRHRD-360 Training Systems in Business and Industry
- INMGT-410 Six Sigma Quality Improvement Methods
- INMGT-350 Facilities Planning
- INMGT-475 Advanced Project Management
- XXX-XXX *Other Approved Course* (2.00-3.00 cr.)

## Sustainable Management, B.S.

[Go to program website](#)

### Introduction

The Bachelor of Science degree in Sustainable Management is a multidisciplinary program designed to help students gain a comprehensive understanding of the ways in which business structures, environmental processes and societal needs intersect. Corporations from across the country helped to develop the curriculum, believing in the value it will bring to their employees and their companies. The Sustainable Management program is a collaborative effort of UWExtension and four University of Wisconsin campuses: UW-Stout, UW-River Falls, UW-Superior, and UW-Parkside. It provides students with the knowledge and skills needed to create profitable businesses, vibrant communities, and a healthy environment. The program is a 21 course, 63-credit bachelor's degree completion program designed for working professionals, with all courses delivered online.

Students who have completed the first two years of a bachelor's degree, or have an associate's degree, may apply directly to the program. Students who need to complete general education requirements may do so online through UW-Stout or the UW Colleges.

## **General Requirements**

### **Bachelor of Science Degree**

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

## **Program Requirements**

### **General Education**

*40 credits required*

#### **Communication Skills (9 credits)**

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### **Analytic Reasoning and Natural Sciences (10 credits)**

- BIO-101 Introductory Biology
- MATH-120 Introductory College Mathematics I (*or above*)
- STAT-130 Elementary Statistics

#### **Arts and Humanities (6 credits)**

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.*

#### **Social and Behavioral Sciences (6 credits)**

*Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.*

#### **Contemporary Issues (3 credits)**

*Courses must be selected from the list of approved contemporary issues courses.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

**80 credits required**

## Professional Preparation Selectives (17 credits)

*Some SMGT courses have prerequisites. If you have not completed the prerequisites necessary as part of an associate's degree or prior coursework, you will need to take courses in consultation with your program director to fulfill this requirement.*

## Core Requirements (63 credits)

- SMGT-115 Environmental Science and Sustainability
- SMGT-230 Triple Bottom Line Accounting for Managers
- SMGT-235 Economics in Society and Sustainability
- SMGT-240 Technical Writing for Sustainable Management
- SMGT-310 Ecology for Sustainable Management
- SMGT-315 Global Environmental Chemistry
- SMGT-320 Energy for Sustainable Management
- SMGT-325 Natural Resource Management
- SMGT-330 Marketing for a Sustainable World
- SMGT-331 Sustainable Organizational Finance
- SMGT-332 Economics of Environmental Sustainability
- SMGT-335 Management and Environmental Information Systems
- SMGT-340 Organizational Behavior and Sustainability
- SMGT-350 Operations Management and Sustainability
- SMGT-360 Environmental and Sustainability Policy
- SMGT-370 Logistics, Supply Chain Management, and Sustainability
- SMGT-430 International Management for a Sustainable World
- SMGT-435 International Development and Sustainability
- SMGT-220 Systems Thinking
- SMGT-460 Environment and Society
- SMGT-495 Sustainable Management Capstone

## Technology and Science Education, B.S.

Go to program website

## Introduction

UW-Stout is the only university or college in the state of Wisconsin offering a Bachelor of Science degree combining Technology and Science Education, offering students a unique opportunity. Students will participate in a collaborative, interdisciplinary degree program that prepares them as teachers in the overlapping fields of science and technology. Coursework in the program leads to a dual teaching certification in technology education with a major or minor certification in biology, chemistry, or physics. To fulfill the requirements of the program, students will complete technology, science, and education courses. Students will also complete required pedagogical courses specifically in technology and science education. Pre-student teaching experiences in both middle and high school classrooms as well as a semester-long student teaching experience will be required.

## General Requirements Bachelor of Science Degree

Total for graduation	138-147 credits
General Education	40 credits
Major Studies	80 credits
Certification	18-28 credits

## Program Requirements

### General Education

*40 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

#### Analytic Reasoning and Natural Sciences (11 credits)

- MATH-153 Calculus I
- STAT-320 Statistical Methods
- XXX-XXX Physical Science course with lab (4.00 cr.)

## Arts and Humanities \* (6 credits)

- LIT-XXX Any *Literature* (3.00 cr.)
- XXX-XXX Any creative or performing arts (1.00-3.00 cr.)

*Remaining course must be from areas including art history, creative arts, foreign language and culture, history, music appreciation, performing arts or philosophy.*

## Social and Behavioral Sciences \* (6 credits)

- PSYC-110 General Psychology

### Additional Course:

*Remaining course must be from areas including art history, creative arts, foreign language and culture, history, music appreciation, performing arts or philosophy.*

### Note(s):

*\*Either HIST-210 Modern World must be taken under Arts and Humanities or ANTH-220 Cultural Anthropology must be taken under Social and Behavior Sciences.*

## Contemporary Issues (3 credits)

- BIO-111 Science, the Environment and Sustainability

## Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

## Selective (2 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Requirements

### **80 credits required**

## Professional Education (41 credits)

*Grade of "C" or better required for all courses.*

- EDUC-303 Educational Psychology
- EDUC-326 Foundations of Education

- RDGED-382 Content Area Reading
- SPED-430 Inclusion of Students with Exceptional Needs
- STMED-160 Introduction to Technology and Science Education
- STMED-260 Curriculum Methods & Assessment for Science & Technology
- STMED-360 Pre-Student Teaching in Science Technology and Math Education
- STMED-390 Laboratory and Classroom Management in Science and Technology
- STMED-460 Teaching Methods for Science and Technology Education
- TECED-340 Middle School Technology Education
- TECED-409 Student Teaching in Technology Education

## The Designed World (35 credits)

- AEC-172 Construction Technology
- AEC-131 Architectural Graphics *or*
- ENGGR-112 Engineering Graphics Fundamentals
- CMG-141 Cross-Media Graphics
- ELEC-204 Electricity/Electronics Fundamentals
- MFGT-110 Materials and Manufacturing Processes
- MFGT-202 Welding and Casting Processes *or*
- MFGT-203 Machining Metal Forming Processes
- MFGT-204 Polymer Processes
- POWER-396 Mechatronics (3.00 cr.)
- RD-205 Design for Industry
- RD-420 Research and Development
- RD-421 Research and Development Laboratory
- TECED-XXX Technology Practicum I (2.00 cr.)
- TECED-XXX Technology Practicum II (3.00 cr.)

## Technical Selectives (4 credits)

*See adviser for an approved course list.*

## Science Courses (18 credit minimum)

*Choose at least one major or one minor science certification from the list below:*

### Biology Major Certification (28 credits)

- BIO-135 Organismal Biology
- BIO-136 College Molecular Cell Biology I



Selectives:

*Choose 13 additional credits of approved biology selectives above the introductory level.*

#### Chemistry Major Certification (28 credits)

- CHEM-135 College Chemistry I
- CHEM-136 College Chemistry II
- CHEM-201 Organic Chemistry I
- CHEM-331 Quantitative Analysis

Selectives:

*Choose 11 additional credits of approved chemistry selectives above the introductory level.*

#### Physics Major Certification (28 credits)

- PHYS-151 Astronomy
- PHYS-241 College Physics I
- PHYS-242 College Physics II
- ELEC-260 Electrical Circuits

Selectives:

*Choose 12 additional credits of approved physics selectives above the introductory level.*

#### Biology Minor Certification (18 credits)

- BIO-135 Organismal Biology
- BIO-136 College Molecular Cell Biology I

Selectives:

*Choose 9 additional credits of approved biology selectives above the introductory level.*

#### Chemistry Minor Certification (18 credits)

- CHEM-135 College Chemistry I
- CHEM-136 College Chemistry II

Selectives:

*Choose 8 additional credits of approved chemistry selectives above the introductory level.*

## Physics Minor Certification (18 credits)

- PHYS-241 College Physics I
- PHYS-242 College Physics II

Selectives:

*Choose 8 additional credits of approved physics selectives above the introductory level.*

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a minimum grade of 2.00 (C) in STMED-160 Introduction to Technology and Science Education
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

### Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment

- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

## Technology Education, B.S.

Go to program website

### Introduction

Technology Education is a Bachelor of Science degree program consisting of general, professional and technical course work that leads to teaching certification in all 50 states. Students who complete the B.S. in Technology Education may be eligible for credits relative to Project Lead the Way, a K-12 pre-engineering teaching initiative. Although the program is designed to lead to an education degree, graduates have also found challenging career opportunities in fields related to communication, construction, manufacturing and transportation. More than 30 credits of technical requirements provide students with hands-on experiences using computers, robots, electronics, and more conventional equipment used in processing materials, transportation, construction and processing information. Course work is enriched by involvement with professional organizations and professional activities.

The program is also offered with a distance option for geographically-bound students seeking Career and Technical Education certification.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

*A minimum of 120 credits and a 2.75 GPA are required for graduation.*

### Program Requirements

#### General Education

*40 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I

- SPCOM-100 Fundamentals of Speech

### Analytic Reasoning and Natural Sciences (10 credits)

- MATH-121 Introductory College Mathematics II (*or higher level*)
- STAT-XXX *Any statistics* (2.00 cr.)

Additional Course:

*Remaining course must be a physical science with a lab.*

### Arts and Humanities\* (6 credits)

- LIT-XXX *Any Literature* (1.00-3.00 cr.)
- XXX-XXX *Any Creative/Performing Arts* (1.00-3.00 cr.)

Additional Courses:

*Choose additional courses from areas including art history, foreign language and culture, history, music appreciation and philosophy.*

### Social and Behavioral Sciences \* (6 credits)

- PSYC-110 General Psychology

Additional Course:

*Remaining course must be from areas of anthropology, economics, geography, political science or sociology.*

Note(s):

\* Either HIST-210 Modern World must be taken under Arts and Humanities or ANTH-220 Cultural Anthropology must be taken under Social and Behavioral Sciences.

### Contemporary Issues (4 credits)

- BIO-111 Science, the Environment and Sustainability

### Social Responsibility and Ethical Reasoning (3 credits)

- EDUC-330 Multiculturalism: Dialogue and Field Experience

## Selectives (2 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies - On Campus

**80 credits required**

### Professional Education (41 credits)

*Grade of "C" or better required for all courses. Courses with the TECED and STMED prefix can only be repeated once.*

- EDUC-303 Educational Psychology
- EDUC-326 Foundations of Education
- RDGED-382 Content Area Reading
- SPED-430 Inclusion of Students with Exceptional Needs
- STMED-160 Introduction to Technology and Science Education
- STMED-260 Curriculum Methods & Assessment for Science & Technology
- STMED-360 Pre-Student Teaching in Science Technology and Math Education
- STMED-390 Laboratory and Classroom Management in Science and Technology
- STMED-460 Teaching Methods for Science and Technology Education
- TECED-340 Middle School Technology Education
- TECED-409 Student Teaching in Technology Education

### The Designed World (40 credits)

- AEC-131 Architectural Graphics *or*
- ENGGR-112 Engineering Graphics Fundamentals
- AEC-172 Construction Technology
- CMG-141 Cross-Media Graphics
- ELEC-204 Electricity/Electronics Fundamentals
- MFGT-110 Materials and Manufacturing Processes
- MFGT-202 Welding and Casting Processes *or*
- MFGT-203 Machining Metal Forming Processes
- MFGT-204 Polymer Processes
- POWER-371 Mechatronics
- RD-205 Design for Industry
- RD-420 Research and Development
- RD-421 Research and Development Laboratory
- TECED-XXX Technology Practicum I (2.00 cr.)
- TECED-XXX Technology Practicum II (3.00 cr.)

## Technical Selectives (5 credits)

*All Technology Education students are required to meet with their adviser to plan their Technical Selectives. The purpose of this requirement is to provide the student with an opportunity to create more depth of understanding and skill within technical areas that are likely to be part of their teaching responsibilities at the secondary level. Some courses or sequences of courses may provide a student the opportunity to seek certifications by outside accrediting bodies such as Project Lead the Way. Technical college transfers need to meet with an advisor to gain approval of technical transfer courses.*

## Major Studies - Distance Delivery Option

*80 credits required*

## Professional Education (39 credits)

*Grade of "C" or better required for all courses. Courses with the TECED and STMED prefix can only be repeated once.*

- EDUC-303 Educational Psychology
- CTE-302 Principles of Career and Technical Education
- CTE-438 Course Construction in Career and Technical Education
- CTE-405 Methods of Teaching Career and Technical Education
- CTE-440 Instructional Evaluation in Career and Technical Education
- EDUC-415 Classroom Management
- RDGED-382 Content Area Reading
- SPED-430 Inclusion of Students with Exceptional Needs
- STMED-360 Pre-Student Teaching in Science Technology and Math Education
- TECED-409 Student Teaching in Technology Education

## The Designed World (35 credits)

- AEC-131 Architectural Graphics *or*
- ENGGR-112 Engineering Graphics Fundamentals
- AEC-172 Construction Technology
- CMG-141 Cross-Media Graphics
- ELEC-204 Electricity/Electronics Fundamentals
- MFGT-110 Materials and Manufacturing Processes
- MFGT-202 Welding and Casting Processes *or*
- MFGT-203 Machining Metal Forming Processes
- MFGT-204 Polymer Processes
- POWER-371 Mechatronics
- RD-205 Design for Industry
- RD-420 Research and Development
- RD-421 Research and Development Laboratory
- TECED-XXX Technology Practicum I (2.00 cr.)

- TECED-XXX Technology Practicum II (3.00 cr.)

## Technical Selectives (6 credits)

*All Technology Education students are required to meet with their adviser to plan their Technical Selectives. The purpose of this requirement is to provide the student with an opportunity to create more depth of understanding and skill within technical areas that are likely to be part of their teaching responsibilities at the secondary level. Some courses or sequences of courses may provide a student the opportunity to seek certifications by outside accrediting bodies such as Project Lead the Way. Technical college transfers need to meet with an advisor to gain approval of technical transfer courses.*

## Vocational Certification

A student who wishes to become certifiable to teach an advanced level occupational skills course in Wisconsin must complete this degree program, a course in Principles of Career and Technical Education, and a course in Organization and Administration of Cooperative Education Programs. The student must also have a minimum of 2,000 hours of related work experience.

## Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

### Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmi.cfm](http://www.uwstout.edu/soe/current/ugbmi.cfm).

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL 101 or ENGL 102 or ENGL 111 and ENGL 112
- Earn a grade of at least 2.00 (C) in SPCOM 100
- Earn a minimum grade of 2.00 (C) in STMED 160 Introduction to Technology and Science Education
- Complete EDUC 326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

### Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmii.cfm](http://www.uwstout.edu/soe/current/ugbmii.cfm).

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

## Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: [www.uwstout.edu/soe/current/ugbmiii.cfm](http://www.uwstout.edu/soe/current/ugbmiii.cfm).

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

## Vocational Rehabilitation, B.S.

Go to program website

### Introduction

The main objective of this program is to provide the field of rehabilitation with baccalaureate level personnel who have the competencies necessary to help persons with disabilities optimize their vocational potential. A general listing of these competencies includes:

1. Knowledge of the history, philosophy and development of the rehabilitation movement; knowledge of the rehabilitation process as it exists in various settings, including supported environments, rehabilitation organizations, private rehabilitation, vocational rehabilitation agencies; knowledge of mental, physical and social disabilities plus the vocational limitations of these disabilities; knowledge of, and ability to utilize community resources to assist persons with disabilities; knowledge of, and ability to relate to allied professions: medicine, psychology, social work, physical therapy; and knowledge of, and ability to utilize occupational information and career planning methods.
2. Elementary skill in the use of vocational evaluation techniques, elementary skill in work adjustment and counseling techniques, and elementary skill in utilizing job placement and follow-up procedures for persons with disabilities.
3. Ability to interact effectively with persons with disabilities. This could include persons with physical, emotional and social disabilities such as mental illness, mental retardation, blindness, deafness, alcoholism, epilepsy, and those who have committed criminal offenses.

The graduates of this program are employed in community-based rehabilitation programs, rehabilitation organizations, vocational rehabilitation agencies, private rehabilitation, correctional centers, business and industry, adult day centers, adolescent treatment programs and services, mental health clinics, halfway houses, and a variety of other settings serving persons with disabilities. Students who complete Special Education Certification are endorsed for Wisconsin licensure to teach students with cognitive disabilities, grades 6-12. Opportunities for advancement to supervisory and administrative positions are excellent. Graduate study in rehabilitation is available in more than 80 colleges and universities.

Students must select their concentration option by the end of the first semester of their junior year. Students who do not complete a concentration must submit a written plan showing development of a coherent selection of coursework consistent with the objectives of the degree. The plan must be submitted and approved by the program director by the end of the first semester of the junior year.

### General Requirements Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits



Major Studies	54 credits
Concentration	23 credits
Electives	3 credits

## Program Requirements for Vocational Rehabilitation

### General Education

*40 credits required*

#### Communication Skills (9 credits)

- ENGL-101 Composition 1 *or*
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 *or*
- ENGL-112 Freshman English--Honors II *or*
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

Note(s):

*Minimum grade of 2.0 is required; course must be repeated if minimum grade is not earned.*

#### Analytic Reasoning and Natural Sciences (10 credits)

- BIO-132 Human Biology

Additional Courses:

*Remaining courses must include at least one mathematics course or statistics course.*

#### Arts and Humanities (6 credits)

*Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, philosophy and performing arts.*

#### Contemporary Issues (3 credits)

*Courses must be selected from the list of approved contemporary issues courses.*

## Social and Behavioral Sciences (6 credits)

- PSYC-110 General Psychology

## Additional Courses:

*Remaining courses must be from one or more areas including anthropology, economics, geography, political science and sociology.*

## Social Responsibility and Ethical Reasoning (3 credits)

*Courses must be selected from the list of approved social responsibility and ethical reasoning courses.*

## Selectives (3 credits)

*Courses/credits may be selected from any category to meet the 40-credit requirement.*

## Major Studies

### **55 credits required**

*A minimum grade of 2.0 is required in all rehabilitation studies. After earning 90 credits, students must maintain a 2.5 grade point average in rehabilitation studies to continue in the degree program.*

## Required Courses (31 credits)

- BIO-220 Physiology of Disabilities
- COUN-405 Introduction to Basic Counseling Skills
- REHAB-101 Introduction to Rehabilitation
- REHAB-102 Community Resources
- REHAB-201 Pre Practicum in Rehabilitation
- REHAB-230 Psychosocial Aspects of Disability
- REHAB-310 Vocational Assessment Applications in Rehabilitation
- REHAB-401 Principles and Techniques of Caseload Management
- REHAB-410 Job Placement Processes
- REHAB-470 Work Adjustment Services
- REHAB-398 Rehabilitation Practicum

## Selectives (23 credits)

*Select 23 credits, including a minimum of two courses from Disability Selectives and two from Service Delivery Selectives.*

## Disability Selectives

Select at least two courses from the following:

- COUN-494 Counseling Older Persons
- REHAB-355 Rehabilitation of the Older Disabled Worker
- PSYC-361 Abnormal Psychology
- REHAB-305 Sign Language I
- REHAB-306 Sign Language II
- REHAB-325 Rehabilitation and Sensory Disability
- REHAB-320 Rehabilitation and Chemical Dependency
- REHAB-321 Rehabilitation of Public Offenders
- REHAB-482 Sexuality and Disability
- REHAB-327 Psychiatric Rehabilitation
- SCOUN-447 Emotional and Behavioral Problems of Children and Adolescents
- SOC-360 Sociology of Juvenile Delinquency
- SPED-300 Introduction to Individuals with Cognitive Disabilities
- SPED-301 Learning Disabilities
- SPED-330 Introduction to Communication Disorders
- SPED-430 Inclusion of Students with Exceptional Needs
- SPED-430 Inclusion of Students with Exceptional Needs (3.00 cr.)

### Service Delivery Selectives

Select at least two courses from the following:

- HDFS-225 Skill Training for Individual/Family Interventions
- PSYC-370 Interpersonal Effectiveness Training
- REHAB-300 Special Topics in Rehabilitation
- REHAB-350 Independent Living
- REHAB-351 Benefits Coordination: Practice and Application
- REHAB-360 Assistive Technology
- REHAB-402 Management of Non-Profit Organizations
- REHAB-452 Group Processes in Rehabilitation Settings
- REHAB-460 Rehabilitation in the Private Sector
- REHAB-461 Forensics for the Human Service Professional
- REHAB-462 Absence Management
- REHAB-480 Advanced Rehabilitation Practicum
- REHAB-483 Vocational Counseling Issues
- REHAB-488 Developing Collaborative Partnerships
- REHAB-X49 Rehabilitation Cooperative Education Experience (2.00-6.00 cr.)
- REHAB-X99 Independent Study
- REHAB-XXX Benefit Specialist Practice and Application
- SOCWK-205 Introduction to Social Work
- SOCWK-420 Human Behavior and Social Environment
- SOCWK-430 Social Casework Methods

- SOCWK-440 Social Work Practice with Groups and Families
- SOCWK-450 Macro Social Work Practice
- SPED-324 Curriculum & Instruction: Career & Transition Education

## Concentrations

### **23 credits required**

*A minimum grade of 2.5 is required in all concentration courses.*

### Independent Living Rehabilitation (23 credits)

#### Required Courses (13 credits)

- COUN-406 Peer Supervisory Experience
- PSYC-370 Interpersonal Effectiveness Training
- REHAB-350 Independent Living
- REHAB-360 Assistive Technology
- REHAB-480 Advanced Rehabilitation Practicum
- REHAB-482 Sexuality and Disability

#### Selectives (10 credits)

- FCSE-385 Family Housing
- FN-102 Nutrition for Healthy Living
- HDFS-115 Healthy Couple Relationships
- HDFS-255 Lifespan Human Development
- HDFS-340 Human Development: Late Adulthood
- PSYC-371 Introduction to Health Psychology
- REHAB-452 Group Processes in Rehabilitation Settings
- REHAB-488 Developing Collaborative Partnerships
- REHAB-X99 Independent Study
- SOCWK-205 Introduction to Social Work
- SOCWK-215 Sociology of the Family (3.00 cr.)
- SOCWK-420 Human Behavior and Social Environment

### Individualized (23 credits)

*Select 23 credit in conjunction with and approved by program director.*

### Psychiatric Rehabilitation (23 credits)

- PSYC-361 Abnormal Psychology *or*
- SCOUN-447 Emotional and Behavioral Problems of Children and Adolescents

- PSYC-120 Psychology of Adjustment
- REHAB-327 Psychiatric Rehabilitation
- REHAB-333 Adolescent Substance Use and Abuse
- REHAB-480 Advanced Rehabilitation Practicum
- REHAB-462 Absence Management
- REHAB-452 Group Processes in Rehabilitation Settings
- REHAB-488 Developing Collaborative Partnerships

## Rehabilitation Service Specialist (23 credits)

### Required Courses (16 credits)

- COUN-406 Peer Supervisory Experience
- HDFS-225 Skill Training for Individual/Family Interventions
- PSYC-120 Psychology of Adjustment
- REHAB-480 Advanced Rehabilitation Practicum
- REHAB-320 Rehabilitation and Chemical Dependency
- REHAB-452 Group Processes in Rehabilitation Settings

### Selectives (7 credits)

- COUN-494 Counseling Older Persons
- HDFS-310 Family Stress, Coping and Adaptation
- HDFS-332 Death and Bereavement
- PSYC-370 Interpersonal Effectiveness Training
- REHAB-321 Rehabilitation of Public Offenders
- REHAB-482 Sexuality and Disability
- REHAB-483 Vocational Counseling Issues
- REHAB-488 Developing Collaborative Partnerships
- REHAB-X99 Independent Study (1.00-3.00 cr.)
- SOC-215 Sociology of the Family (3.00 cr.)
- SOC-340 Sociology of Work
- SOCWK-420 Human Behavior and Social Environment

## Social Work (24 credits)

- HDFS-255 Lifespan Human Development
- HDFS-335 Critical Cultural Competence
- REHAB-480 Advanced Rehabilitation Practicum
- SOCWK-205 Introduction to Social Work
- SOCWK-420 Human Behavior and Social Environment
- SOCWK-430 Social Casework Methods
- SOCWK-440 Social Work Practice with Groups and Families

- SOCWK-450 Macro Social Work Practice

## Substance Abuse Counseling (23 credits)

### Required Courses (20 credits)

- HDFS-426 Substance Abuse and the Family (3.00 cr.)
- REHAB-320 Rehabilitation and Chemical Dependency
- REHAB-333 Adolescent Substance Use and Abuse
- REHAB-327 Psychiatric Rehabilitation
- REHAB-452 Group Processes in Rehabilitation Settings
- REHAB-XXX Developmental and Complex Disabilities (3.00 cr.)
- REHAB-480 Advanced Rehabilitation Practicum

### Selectives (3 credits)

- HDFS-456 Abuse and the Family
- PSYC-370 Interpersonal Effectiveness Training
- REHAB-315 Rehabilitation and Criminal Justice
- REHAB-321 Rehabilitation of Public Offenders
- REHAB-350 Independent Living
- REHAB-482 Sexuality and Disability
- REHAB-483 Vocational Counseling Issues
- REHAB-488 Developing Collaborative Partnerships

## Electives

### 3 credits required

*Courses/credits may be selected from any category to meet the 120-credit requirement.*

## Minor

### Introduction

Minors are defined as either "studies in the discipline" or as "teaching." Teaching minors are those approved by the State Department of Public Instruction for licensure. Requirements for teaching minors include an education major, passing score on the content exam for the minor, portfolio evidence of competence in the Wisconsin Teacher standards and the minor's content, and student teaching experience in the minor field. Contact the School of Education for information regarding teaching minors. Approval forms and minor program plans are available from the School of Education office and the department offices offering the minor.

## Applied Foreign Language Minor

*Department of Speech Communication, Foreign Language, Theatre and Music*

*Before declaring the minor, student must have approval of an individual course plan. The applied project requires signatures of both major and minor program advisers.*

## Program Requirements

**26 credits are required.**

- XXX-XXX Elementary Foreign Language A (8.00 cr.)
- XXX-XXX Intermediate Foreign Language A (8.00 cr.)
- XXX-XXX Elementary Foreign Language B (8.00 cr.)
- TRDIS-350 Applied Foreign Language Project

## Applied Peace Studies Minor

*Social Science Department*

## Program Requirements

**20 credits are required**

### Required Courses

- PAX-201 Introduction to Applied Peace Studies
- PAX-XXX Applied Conflict Analysis and Peacebuilding (3.00 cr.)
- PAX-XXX Seminar in Applied Peace Studies (2.00 cr.)

### Electives

### Social, cultural, and Political Components

*Select 6 credits:*

- ECON-350 Environmental and Natural Resource Economics
- ECON-480 International Economics
- POLS-260 Problems of U.S. Foreign Policy
- SOC-225 Social Problems
- SOC-375 Sociology of Minority Groups
- LIT-275 Environmental Literature

### Understanding the Nature of Conflict

*Select 3 credits:*

- HIST-311 Women and War: A Global Perspective in the Modern Era
- HIST-330 History of World War II
- HIST-335 World War II: An Ethnic and Global History
- HIST-350 History of the Vietnam War

## Movements Toward Peace

*Select 3 credits:*

- PHIL-205 Philosophy of Religion
- PHIL-215 Eastern Philosophy
- PHIL-220 Multicultural Philosophy

## Art History Minor

*Department of Art and Art History*

## Program Requirements

**21 credits required**

### Required Courses (6 credits)

- ARTH-223 Survey of Art--Ancient Through Medieval
- ARTH-224 Survey of Art-Renaissance Through 20th Century

Choose 3 credits from each of these categories:

### Ancient to Baroque Distribution (3 credits)

- ARTH-326 Greek and Roman Art
- ARTH-327 Medieval Art
- ARTH-328 Italian Renaissance Art
- ARTH-329 Northern Renaissance Art
- ARTH-330 Baroque Art
- ARTH-256 Special topics in Art History: Art in Italy

### Modern Distribution (3 credits)

- ARTH-331 Art and Controversy
- ARTH-335 19Th Century Art In Europe
- ARTH-336 Modern Art



- ARTH-337 Art Since 1950

### Diversity Distribution: Global/Ethnic/Non-Western/Gender Studies (3 credits)

- ARTH-225 Introduction to Non-Western Art
- ARTH-332 Gender and Art
- ARTH-339 Japanese Art and Culture
- ARTH-256 Special topics in Art History: Art in Italy

### Design Distribution (3 credits)

- ARTH-319 History of Design
- ARTH-333 History of Interiors and Furnishings
- ARTH-340 History of Interactive Media

### Selectives (3 credits)

*Choose three additional credits from the categories listed above.*

## Biology Minor

*Department of Biology*

### Program Requirements

**20 credits required**

#### Required Courses

- BIO-136 College Molecular Cell Biology I

Select one of the following:

- BIO-101 Introductory Biology
- BIO-111 Science, the Environment and Sustainability
- BIO-132 Human Biology
- BIO-135 Organismal Biology
- BIO-141 Plants and People

#### Selectives

*Choose remaining credits from biology courses at the 200 level or higher to fulfill the 20 credit minimum. A minimum grade of "C" is required for all courses applied to the biology minor.*

## **Biomedical Instrumentation Minor**

*Department of Engineering and Technology*

### **Program Requirements**

**22 credits are required**

### **Required Courses**

- CHEM-125 Principles of Chemistry for Health Sciences *or*
- CHEM-135 College Chemistry I
  
- BIO-234 Physiology and Anatomy
  
- ELEC-204 Electricity/Electronics Fundamentals *or*
- ELEC-260 Electrical Circuits *or*
- ELEC-290 Circuits and Devices *or*
- CEE-205 Circuit Analysis and Design
  
- ELEC-XXX Biomedical Instrumentation (3.00 cr.)
  
- BIO-358 Introductory Pharmacology *or*
- BIO-360 Introduction to Neuroscience *or*
- BIO-362 Advanced Physiology

### **Selectives**

*Additional courses to complete 22 credits will be selected from a list provided by the adviser.*

## **Business Administration Minor**

*Department of Business*

### **Program Requirements**

**22 credits are required.**

### **Required Courses**

- BUACT-206 Introduction to Financial Accounting
- BUACT-207 Introduction-Corporate and Managerial Accounting

- BUMGT-304 Principles of Management
- BUMKG-330 Principles of Marketing
- ECON-210 Principles of Economics I
- ECON-215 Principles of Economics II

## Selectives

*Select 4 credits from the list supplied by the department.*

## Chemistry Minor

*Department of Chemistry and Physics*

## Program Requirements

**21 credits are required.**

## Required Courses

- CHEM-125 Principles of Chemistry for Health Sciences  
*or*
- CHEM-135 College Chemistry I
- CHEM-136 College Chemistry II
- CHEM-201 Organic Chemistry I

Select one of the following:

- CHEM-204 Organic Chemistry II Lecture
- CHEM-331 Quantitative Analysis
- CHEM-335 Instrumental Methods of Analysis
- CHEM-301 Physical Chemistry Lecture
- CHEM-303 Physical Chemistry Laboratory

## Selectives

*Additional departmental offerings to complete 21 credits will be selected. A minimum grade of "C" (2.0) is required in all chemistry courses applied toward the chemistry minor.*

## Coaching Minor

*Department of Physical Education*

## Program Requirements

**24 credits are required.**

### Area I: Medical Emergencies (5 credits required)

- HLTH-340 ARC Standard First Aid and Personal Safety (2.00 cr.)
- HLTH-350 Prevention and Care of Athletic Injuries

### Area II: Area II: Principles and Psycho-Social Foundations of Coaching (4 credits required)

- PE-352 Theory and Management of Coaching
- PE-362 Psycho-Social Aspects of Athletics

### Area III: Methods and Strategies of Coaching (2 credits required)

- PAX-401 Applied Peace Studies Seminar
- PE-460 Coaching Basketball
- PE-461 Coaching Football
- PE-465 Coaching Competitive Swimming (2.00 cr.)
- PE-470 Coaching Baseball
- PE-471 Coaching Track and Field
- PE-477 Coaching Tennis (2.00 cr.)
- PE-478 Coaching and Officiating Volleyball
- PE-479 Coaching Wrestling (2.00 cr.)
- PE-480 Coaching Youth Athletes
- PE-481 Coaching Hockey
- PE-483 Coaching Softball (2.00 cr.)
- PE-483 Coaching Soccer

### Area IV: Kinesiological and Biomechanical Foundations of Coaching (7 credits required)

- BIO-132 Human Biology
- HLTH-355 Kinesiology

### Area V: Physiological Foundations of Coaching (3 credits required)

- HLTH-365 Physiology of Exercise

### Area VI: Practicum in Coaching (required)

- PE-490 Practicum in Coaching

## Area VII: Selectives

*Select additional courses from the list supplied by the department for the 24-credit minor.*

## Cognitive Neuroscience Minor

*Department of Psychology*

### Program Requirements

*20 credits are required.*

#### Required courses

- CNS-200 Introduction to Cognitive Neuroscience
- CNS-201 Introduction to Cognitive Neuroscience Lab
- BIO-360 Introduction to Neuroscience
- PSYC-391 Applied Psychophysiological Methods
- CNS-XXX Independent Study (1.00-2.00 cr.)
- CNS-XXX Special Topics in Cognitive Neuroscience (1.00-4.00 cr.)

#### Selectives

- PSYC-442 Cognitive Processes *or*
- PSYC-432 Perception

#### Electives

*Select additional courses to complete 20 credits from the approved list supplied by the advisor. Psychology Majors: No more than 50 percent of credits in the minor can be in PSYC courses.*

## Communication Studies Minor

*Department of Communication Studies, Foreign Languages, and Performing Arts*

### Program Requirements

**20 credits are required.**

#### Core (9 credits)

- SPCOM-210 Interpersonal Speech Communication
- SPCOM-312 Intercultural Communication
- SPCOM-350 Nonverbal Communication

### Presentation Skills (5-6 credits)

- SPCOM-100 Fundamentals of Speech
- SPCOM-200 Persuasive Speaking
- SPCOM-308 Speech Skills for Business and Industry

### Electives (5-6 credits)

- SPCOM-101 Forensics
- SPCOM-102 Forensics
- SPCOM-200 Persuasive Speaking
- SPCOM-206 Discussion
- SPCOM-208 Theory of Communication
- SPCOM-236 Listening
- SPCOM-308 Speech Skills for Business and Industry
- SPCOM-399 Independent Study
- SPCOM-400 Special topics in Communication Seminar
- SPCOM-414 Interviewing
- SPCOM-425 Informational Interviewing Skills for Professionals

## Computer Networking System and Design Minor

*Department of Apparel and Communication Technologies*

### Program Requirements

**21 credits required**

#### Required courses (9 credits)

- ICT-103 Information and Communication Technologies
- ITM-133 Networking Fundamentals I
- ITM-134 Networking Fundamentals II

#### Selectives

*Choose 12 credits from the following courses:*

- ITM-330 IP Telephony Design & Implementation

- ITM-361 Workstation And Server
- ITM-362 Server Applications
- ITM-363 Directory Services
- ITM-382 Network Systems Design
- ITM-383 Introduction to Network Security
- ITM-391 Wireless Systems
- ITM-441 Scalable Internetworks
- ITM-443 Multi-Layer Switched Networks
- ITM-444 Internetwork Troubleshooting
- ITM-450 Enterprise Solutions and Unified Communications
- ITM-484 Advanced Network Security and Auditing

## Computer Science Minor

*Department of Mathematics, Statistics and Computer Sciences*

### Program Requirements

**21 credits are required.**

#### Required Courses

- CS-144 Computer Science I
- CS-145 Computer Science II
- CS-244 Data Structures

#### Selectives

*Select additional courses to complete 21 credits from the approved list supplied by the department. Grades for courses taken for the minor must be 2.0 (C) or better.*

## Construction Safety/Risk Control Minor

*Department of Engineering and Technology*

### Program Requirements

**18 credits are required.**

#### Required Courses (11 credits)

- RC-388 Construction Safety
- RC-392 Construction Risk Management

- RC-383 Occupational Safety and Health Standards
- AEC-449 Cooperative Education Experience

## Selectives

*Select 7 credits for selectives from program plan sheet supplied by adviser. The minor is specifically limited to Construction majors or those who have taken the eight construction course sequence containing the integrated Risk Control content.*

## Disability Services Minor

*Department of Rehabilitation and Counseling*

## Program Requirements

**22 credits are required.**

## Required Courses

- REHAB-101 Introduction to Rehabilitation
- REHAB-102 Community Resources
- REHAB-201 Pre Practicum in Rehabilitation
- REHAB-230 Psychosocial Aspects of Disability

## Selectives

*Choose 8 credits of restricted professional selectives. See the adviser for available offerings.*

## Required Practicum

- REHAB-205 Rehabilitation Practicum

**Note:**

*Must be taken **last** after all 18 other rehabilitation credits are complete.*

## Economics Minor

*Department of Social Sciences*

## Program Requirements

**20-21 credits are required.**



## Required Courses

- ECON-210 Principles of Economics I
- ECON-215 Principles of Economics II
- ECON-325 Economic and Business Statistics *or*
- STAT-130 Elementary Statistics *or*
- STAT-320 Statistical Methods
- ECON-410 Microeconomics
- ECON-415 Macroeconomics

## Selectives

*Select six additional credits from the approved course list supplied by the department.*

## Economics Teaching Minor

### Program Requirements

*In addition to the 20-21 credits required for the Economics Minor, students seeking teaching certification must take:*

- EDUC-304 Secondary Curriculum Methods and Assessment
- EDUC-305 Student Teaching

## English Writing Minor

*Department of English and Philosophy*

### Program Requirements

**15 credits are required.**

**Writing Requirement (3 credits):**

*take any course with an ENGL prefix except 090, 101, 102, 111, 112 and 113.*

**Literature Requirement (3 credits):**

*take any course with a LIT prefix.*

**Electives (9 credits):**

*take any additional course with a LIT or ENGL prefix except 090, 101, 102, 111, 112 and 113.*

Note:

*Minor cannot be elected by students in the Professional Communication and Emerging Media program.*

## **Enterprise Technology Minor**

*Department of Apparel and Communication Technologies*

### **Program Requirements**

*21 credits required.*

#### **A. Core Courses (18 credits)**

- ICT-103 Information and Communication Technologies
- ICT-305 Information Systems for Enterprise
- ICT-309 Collaborative Computing
- ICT-401 Information Technology Policy And Audit
- ICT-405 Enterprise Technology Seminar
- BUACT-206 Introduction to Financial Accounting

#### **Selective Courses (3 credits)**

- INMGT-200 Production and Operations Management
- BUSCM-437 Procurement, Sourcing and Supply Chain Management

## **Food Technology Minor**

*Department of Food and Nutrition*

### **Program Requirements**

**35 credits are required.**

#### **Required Courses**

- INMGT-200 Production and Operations Management
- PKG-150 Packaging Fundamentals
- FN-124 Foods *or*
- FN-240 Food Science

- FN-212 Nutrition
- FN-342 Advanced Foods
- FN-438 Experimental Foods
- FN-350 Unit Operations in Food Processing
- BIO-306 General Microbiology
- CHEM-311 Biochemistry
- CHEM-315 Food Chemistry
- PHYS-211 Introduction to Physics

## **Geographic Information Systems Minor**

*Department of Social Sciences*

### **Program Requirements**

*20 credits are required.*

#### **Required Courses**

- GEOG-251 Introduction to Geographic Information Systems
- GEOG-351 Intermediate Geographic Information Systems
- GEOG-451 Advanced Geographic Information Systems
- GEOG-452 Geographic Information Systems Research Analysis

#### **Selectives**

Additional courses to complete a minimum of 20 credits will be selected in consultation with your adviser. Selectives include at least two courses 200 level or above that enhance the tools of GIS for individual programs. A minimum grade of C is required for all courses applied to the Geographic Information Systems minor.

## **Health and Wellness Education Minor**

*Department of Physical Education and Athletics*

### **Program Requirements**

**24 credits are required.**

#### **Required Courses**

- BIO-132 Human Biology *or*
- BIO-234 Physiology and Anatomy
- HLTED-360 Personal Health and Fitness

- HLTED-375 Methods In Health, Wellness and Fitness
- HLTED-376 Organization and Administration of Health Education
- HLTED-485 Health Education Student Teaching
- HWF-340 Community CPR, Automatic External Defibrillation and First Aid

## Selectives

*6 additional credits of selectives from program plan sheet supplied by adviser.*

## Health and Wellness Minor

*Department of Physical Education and Athletics*

## Program Requirements

**23 credits are required**

### Required Courses

- BIO-132 Human Biology or
- BIO-234 Physiology and Anatomy
- FN-210 Issues and Ethics in Food and Nutrition
- HLTED-360 Personal Health and Fitness
- HLTED-375 Methods In Health, Wellness and Fitness
- HLTH-499 Independent Study (*Practicum in Health and Wellness*)
- HWF-340 Community CPR, Automatic External Defibrillation and First Aid
- HWF-380 Fitness Club Management or
- HWF-390 Recreational Facilities Management and Leadership

## Selectives

Select 1-4 additional credits from selectives.

- BIO-125 Biology of Aging
- BIO-128 Community Health
- BIO-220 Physiology of Disabilities
- FN-212 Nutrition
- FN-355 Sports Nutrition
- FN-380 Community Nutrition
- FN-396A Obesity and Eating Disorders
- HDFS-115 Healthy Couple Relationships
- HDFS-257 Lifespan Sexuality
- HDFS-310 Family Stress, Coping and Adaptation

- HDFS-345 Health Care Dilemmas & Decisions for Families
- HLTH-350 Prevention and Care of Athletic Injuries
- HLTH-355 Kinesiology
- HLTH-365 Physiology of Exercise
- HWF-275 Lifespan Health, Wellness and Fitness
- HWF-322 Fitness Assessment
- HWF-348 Stress Assessment and Intervention
- HWF-418 Administration of Strength Training and Conditioning
- PE-1XX Any 100 level course in this department (1 cr.)
- PE-201 Wellness and Social Responsibility
- PE-205 Lifelong Wellness: Biggest Loser Style
- PSYC-120 Psychology of Adjustment
- PSYC-333 Drugs and the Brain
- PSYC-335 Motivation and Emotion
- PSYC-370 Interpersonal Effectiveness Training
- PSYC-371 Introduction to Health Psychology
- PSYC-377 Consumer Psychology
- PSYC-382 Human Resource Management
- REHAB-320 Rehabilitation and Chemical Dependency
- SOC-291 Sociology of Health and Illness

## History Minor

*Department of Social Sciences*

## Program Requirements

**22 credits are required.**

### Required Courses

- HIST-120 Early United States History
- HIST-121 Modern United States History
- HIST-140 Western Civilization
- HIST-141 Western Civilization

### Selectives

*Additional departmental offerings to complete 22 credits will be selected.*

## History Teaching Minor

*Department of Social Sciences*

## Program Requirements

**24 credits are required.**

### Required Courses

- EDUC-305 Student Teaching
- HIST-120 Early United States History
- HIST-121 Modern United States History
- HIST-140 Western Civilization
- HIST-141 Western Civilization
- HIST-460 History Methods

### Selectives

*Choose two of the following courses:*

- HIST-322 African-American History
- HIST-360 Asian History
- HIST-380 Latin American History

Additional departmental offerings to complete 24 credits will be selected.

## Human Development and Family Studies Minor

*Department of Human Development and Family Studies*

### Program Requirements

**22 credits are required.**

### Required Courses

- HDFS-115 Healthy Couple Relationships
- HDFS-255 Lifespan Human Development
- HDFS-215 Dynamics of Family Development

Additional departmental offerings to complete 22 credits will be selected.

## Human Physiology Minor

*Biology Department*

## Program Requirements

*20 credits required*

### A. Core Courses (10 credits)

- BIO-220 Physiology of Disabilities *or*
- HLTH-365 Physiology of Exercise
  
- BIO-234 Physiology and Anatomy *or*
- BIO-132 Human Biology
  
- BIO-362 Advanced Physiology

### Selective Courses (10 credits)

- BIO-125 Biology of Aging
- BIO-235 Molecular Cell Biology II \*
- BIO-336 Infection and Immunity
- BIO-358 Introductory Pharmacology
- BIO-360 Introduction to Neuroscience
- BIO-400 Special Topics in Biotechnology
- BIO-425 Proteomics \*
- BIO-434 Cadaver Dissection
- CHEM-311 Biochemistry \*
- HLTH-355 Kinesiology

Note(s):

*\* These courses must be approved by the minor adviser.  
A minimum grade of "C" (2.0) is required in all courses.*

## Human Resource Management

*Department of Psychology*

## Program Requirements

**20-24 credits are required.**

Core courses (9 credits)

- PSYC-382 Human Resource Management
- PSYC-485 Recruitment & Selection of Human Resources
- PSYC-403 Management of Employee Reward Systems

Take one course from each of the following areas:

#### Diversity (2-3 credits)

- PSYC-340 Psychology of Individual and Group Differences
- INMGT-415 Inclusivity in Leadership
- PSYC-372 Psychology of Sex and Gender
- REHAB-462 Absence Management
- SOC-275 Sociology of Gender Roles
- SOC-375 Sociology of Minority Groups

#### Teamwork (2-3 credits)

- INMGT-430 Employee Involvement: Work Teams
- PSYC-270 Social Cognition and Behavior
- PSYC-370 Interpersonal Effectiveness Training
- PSYC-379 Public Relations
- PSYC-455 Myers-Briggs Type Indicator (3.00 cr.)

#### Organization Training and Development (3 credits)

- TRHRD-360 Training Systems in Business and Industry
- INMGT-325 Quality Management
- RC-381 Principles of Occupational Risk Control/Safety

#### Leadership (3 credits)

- INMGT-400 Organizational Leadership
- PSYC-381 Industrial/Organizational Psychology

#### Experiential (2 credits, with approval)

- PSYC-X98 Psychology Field Experience (2.00 cr.)
- XXX-X49 Cooperative Education Experience (1.00-8.00 cr.)

### **Journalism Minor**



## Program Requirements

**22 credits are required.**

### Required Courses

- MEDIA-304 Elementary Photography (2.00-3.00 cr.)
- GCM-141 Graphic Communications and Electronic Publishing (3.00 cr.)
- ENGL-207 Writing for the Media
- ENGL-210 Journalism Practicum
- ENGL-325 Copy Editing and Preparation (2.00 cr.)

### Writing Selectives

*Select 3 to 10 credits from the following:*

- ENGL-320 Business Writing
- ENGL-245 Creative Writing
- ENGL-246 Informational Writing (3.00 cr.)
- ENGL-247 Critical Writing
- ENGL-415 Technical Writing

### Technical Specialty Selectives

*Select up to 7 credits from the following:*

#### Projects Emphasis:

- ENGL-210 Journalism Practicum
- ENGL-437 Technical Writing Practicum

#### Public Relations Emphasis:

- PSYC-379 Public Relations

#### Media Emphasis:

- ENGL-318 Mass Communication: Effects of Technology on Society (3.00 cr.)

#### Production Emphasis:

- GCM-345 Publications Production (3.00 cr.)

## **Lodging Management Minor**

*Hospitality and Tourism Department*

### **Program Requirements**

**23 credits are required.**

### **Required Courses**

- BUACT-206 Introduction to Financial Accounting
- BULGL-318 Business Law I
- HT-100 Introduction to Hospitality
- HT-135 Lodging Systems (3.00 cr.)
- HT-335 Lodging Operations Management
- HT-383 Yield Management
- HT-374 Principles of Timeshare Management
- HT-330 Resort Planning and Operation *or*
- HT-430 Lodging Administration

## **Materials Minor**

*Department of Chemistry and Physics*

### **Program Requirements**

**20 credits are required.**

### **Requirements (13-14 credits)**

- MFGT-150 Introduction to Engineering Materials
- MECH-294 Mechanics of Materials *or*
- PHYS-321 Statics and Strength of Materials
- CHEM-341 Chemistry of Materials
- PHYS-327 Solid State Physics

### **Selectives (choose courses to complete 20 credits)**

- NANO-230 Characterization Methods of Nanomaterials

- CHEM-201 Organic Chemistry I
- CHEM-301 Physical Chemistry Lecture

Note(s):

*As background for the materials minor it is recommended that MATH 153 and NANO 101 be selected as coursework for two of your analytical reasoning and natural sciences general education requirements.*

## Mathematics Non-teaching Minor

### Program Requirements

**22 credits required.**

### Required Courses

Select one option:

Option 1:

- MATH-153 Calculus I
- MATH-154 Calculus II

Option 2:

- MATH-156 Calculus and Analytic Geometry I
- MATH-157 Calculus and Analytic Geometry II

### Selectives

Student may select up to 6 credits from Group I:

- CS-141 Introduction to Programming
- CS-144 Computer Science I
- CS-145 Computer Science II
- STAT-320 Statistical Methods

Note(s):

*The course STAT 320 may not be included if either STAT 331 or STAT 332 is selected from Group II.*

Students must select 9-14 credits from Group II:

- STAT-330 Probability and Statistics for Engineering and the Sciences *or*
- STAT-331 Probability and Mathematical Statistics I
  
- STAT-332 Probability and Mathematical Statistics II
- MSCS-280 Graph Theory with Applications in Computer Science
- MSCS-446 Numerical Analysis I
- MSCS-447 Numerical Analysis II
- MATH-158 Calculus III
- MATH-250 Differential Equations with Linear Algebra
- MATH-255 Differential Equations
- MATH-262 Modern Geometry
- MATH-275 Linear Algebra
- MATH-450 Real Analysis I
- MATH-451 Real Analysis II
- MATH-460 Complex Variables with Applications

Note:

*Both the teaching and non-teaching minors require a grade point of 2.0 or better in all courses applied to the minor.*

## Mathematics Teaching Minor

*Department of Mathematics, Statistics and Computer Sciences*

### Program Requirements

**27 credits are required.**

*Twenty-two credits must be in the discipline and two credits in a teaching practicum.*

Choose one option:

Option 1:

- STAT-330 Probability and Statistics for Engineering and the Sciences

Option 2:

- STAT-331 Probability and Mathematical Statistics I
- STAT-332 Probability and Mathematical Statistics II

## Required Courses

- MATH-153 Calculus I *or*
- MATH-156 Calculus and Analytic Geometry I
  
- MATH-154 Calculus II *or*
- MATH-157 Calculus and Analytic Geometry II
  
- MATH-158 Calculus III
- MATH-262 Modern Geometry
- MATH-275 Linear Algebra
- MATH-370 Modern Algebra I
- EDUC-304 Secondary Curriculum Methods and Assessment
- EDUC-305 Student Teaching

## Selectives

*Additional courses to complete 27 credits will be selected with advisement.*

Choose one option:

## Mechanical and Electrical Construction Minor

*Construction Department*

## Program Requirements

**22 credits are required.**

## Required Courses

- AEC-352 Building Mechanical Systems
- AEC-353 Building Electrical and Control Systems
- AEC-438 Contract Requirements and Specifications
- AEC-455 Advanced Mechanical Construction Systems
- AEC-456 Advanced Electrical Construction Systems
- AEC-473 Mechanical and Electrical Construction Management
- AEC-499 Independent Study
- RC-388 Construction Safety

## Military Leadership Minor

## Program Requirements

**21 credits are required.**

### Military Science emphasis area (select 6 credits)

- MSL-101 Leadership and Personal Development
- MSL-102 Basic Leadership
- MSL-201 Foundations of Leadership
- MSL-202 Leadership and Teamwork
- MSL-301 Adaptive Team Leadership
- MSL-302 Leadership Under Fire

### History emphasis area (select 6 credits, 3 credits must be 300-level or higher)

- HIST-120 Early United States History
- HIST-121 Modern United States History
- HIST-210 Modern World
- HIST-320 History of World War II (3.00 cr.)
- HIST-350 History of the Vietnam War
- HIST-380 Latin American History

### Human Society emphasis area (select 6-8 credits)

- ANTH-220 Cultural Anthropology
- FREN-201 Intermediate French I
- PHIL-235 General Ethics
- POLS-210 American Government
- POLS-260 Problems of U.S. Foreign Policy
- POLS-270 Introduction to Comparative Government
- POLS-340 International Relations
- PSYC-110 General Psychology
- PSYC-120 Psychology of Adjustment
- SOC-110 Introductory Sociology
- SOC-225 Social Problems
- SPAN-201 Intermediate Spanish I

### Leadership and Management emphasis area (select 3 credits)

- BUMGT-304 Principles of Management
- BUMKG-438 Principles of Logistics (3.00 cr.)
- COUN-405 Introduction to Basic Counseling Skills

- INMGT-400 Organizational Leadership
- LOG-250 Critical Thinking
- LOG-301 Introduction to Logical Thinking
- PSYC-382 Human Resource Management

## Performing Arts Minor

### Program Requirements

*18 credits are required.*

#### Core Courses (3 credits)

Minimum of 3 credits required; Select from one or more of these repeatable courses. An additional 3 credits may be applied to lower level requirements (below).

- MUSIC-201 Class Piano II
- MUSIC-264 Jazz Band
- MUSIC-266 Concert Band
- MUSIC-267 Symphonic Singers
- MUSIC-269 Chamber Choir
- MUSIC-270 Vocal Jazz Ensemble
- MUSIC-312 Advanced Voice III
- SPCOM-101 Forensics
- SPCOM-102 Forensics
- THEA-131 Theater Practicum

#### Lower Level Courses (9 credits)

- MUSIC-120 Music Fundamentals
- MUSIC-132 Music in Our World
- MUSIC-134 Rock Music History
- MUSIC-231 Honors Jazz History
- MUSIC-236 Music in Media
- THEA-332 The Directing and Acting Process
- THEA-334 Contemporary Theater

#### Upper Level Courses (6 credits)

- MUSIC-300 Special Topics in Music
- MUSIC-320 Music Theory
- MUSIC-330 Survey of Western Music History
- MUSIC-350 Digital Sound Studio

- THEA-300 Special Topics in Theatre
- THEA-332 The Directing and Acting Process
- THEA-334 Contemporary Theater

## Philosophy Minor

*Department of English and Philosophy*

### Program Requirements

**15 credits are required.**

#### Required Courses

- PHIL-235 General Ethics
- LOG-301 Introduction to Logical Thinking *or*
- LOG-250 Critical Thinking

Select 9 credits from the following:

- PHIL-201 Introduction to Philosophy
- PHIL-205 Philosophy of Religion
- PHIL-215 Eastern Philosophy
- PHIL-220 Multicultural Philosophy
- PHIL-225 Belief, Knowledge and Truth

Note:

*At least six credits in the minor must be taken at UW-Stout. A minimum grade of C is required for each course in the minor with an overall grade point average of 2.67.*

## Photography and Video Minor

*Department of Apparel and Communication Technologies*

### Program Requirements (21 credits)

#### Required Courses (9 credits)

- PHOTO-130 Introduction to Still and Moving Image Photography
- PHOTO-310 Introduction to Photographic Lighting



- PHOTO-330 Introduction to Video Production

## Selectives (9 credits)

*Choose three of the following courses.*

- PHOTO-305 Photo Processes
- PHOTO-375 Product Photography
- PHOTO-411 Photojournalism and Documentary Photography
- PHOTO-412 Nature and Landscape Photography
- PHOTO-421 Architectural and Interior Photography
- PHOTO-425 Corporate Communications and Public Relations Photography
- PHOTO-430 Video/Cinema Practicum
- PHOTO-441 Fashion and Glamour Photography
  
- PHOTO-340 History of Photography *or*
- ARTH-336 Modern Art *or*
- ARTH-337 Art Since 1950 *or*
- ARTH-341 History of Film

## Required Capstone / Senior Project (3 credits)

- PHOTO-495 Professional Portfolio Development

## Physics Minor

*Department of Physics*

## Program Requirements

**22 credits are required.**

## Required Courses

Select one group from the following:

Group I:

- PHYS-241 College Physics I
- PHYS-242 College Physics II

## Group II:

- PHYS-281 University Physics I
- PHYS-282 University Physics II

## Also take:

- PHYS-329 Atomic and Nuclear Physics

## Selectives

*Take 9 more credits of Physics, at least 6 of which are at the 300-level or higher, as approved by the minor adviser.*

## Plant Science Minor

*Department of Biology*

## Program Requirements

**20 credits required.**

## Required:

- BIO-242 Botany

Select at least 6 credits from the following courses:

- BIO-322 Plant Pathology
- BIO-324 Vascular Plant Taxonomy
- BIO-343 Plant Physiology
- BIO-372 Plant Biotechnology

Choose one of the following capstone experience courses:

- BIO-444 Problem in Environmental Sustainability
- BIO-470 Advanced Biotechnology
- BIO-489 Advanced Biology Experience

Choose remaining credits from selectives below:

- BIO-111 Science, the Environment and Sustainability
- BIO-135 Organismal Biology
- BIO-136 College Molecular Cell Biology I
- BIO-141 Plants and People

## **Project Management Minor**

*Department of Operations and Management*

### **Program Requirements**

**18-20 credits are required** (*depending on major*).

### **Required Courses**

- AEC-438 Contract Requirements and Specifications *or*
- BULGL-318 Business Law I
- AEC-470 Construction Estimating II *or*
- BUACT-206 Introduction to Financial Accounting
- INMGT-325 Quality Management
- INMGT-365 Project Management *or*
- AEC-471 Project Scheduling and Cost Control
- INMGT-400 Organizational Leadership *or*
- INMGT-430 Employee Involvement: Work Teams
- SPCOM-210 Interpersonal Speech Communication *or*
- SPCOM-308 Speech Skills for Business and Industry
- INMGT-475 Advanced Project Management

## **Property Management Minor**

*Department of Hospitality and Tourism*

### **Program Requirements**

**25 credits are required.**

### **Prerequisites and Foundations Courses**

- BUACT-206 Introduction to Financial Accounting

- BULGL-365 Principles of Real Estate (3.00 cr.)
- PM-370 Principles of Property Management

## Required Core

- PM-358 Ethical Decision Making in Property Management
- PM-362 Real Estate Market Analysis and Investment Analysis
- PM-371 Commercial/Residential Property Development and Management
- PM-381 Marketing and Leasing Commercial and Residential Property

## Capstone

- PM-470 Seminar In Property Management

## Psychology Minor

*Department of Psychology*

## Program Requirements

**18 credits are required.**

### Required Courses (7 credits)

- PSYC-110 General Psychology
- PSYC-190 Psychological Research Methods

### Selectives (11 credits)

*Select any PSYC course to fulfill the remaining credits.*

## Quality Engineering Minor

*Operations and Management Department*

## Program Requirements

**24 credits are required.**

### Required Courses

- INMGT-325 Quality Management

- INMGT-422 Quality Engineering
- INMGT-410 Six Sigma Quality Improvement Methods
- INMGT-425 Planned Experimentation for Quality Improvement
- INMGT-440 Lean Enterprise
- MFGE-465 Reliability Engineering

## Selectives

*Select 6 additional credits from the list supplied by the department.*

## Quality Management Minor

*Operations and Management Department*

## Program Requirements

**21 credits are required.**

## Required Courses

- INMGT-320 Quality Tools
- INMGT-325 Quality Management
- INMGT-410 Six Sigma Quality Improvement Methods
- INMGT-420 Quality Assurance-Practicum
- INMGT-440 Lean Enterprise

## Selectives

*Select 6 additional credits from the list supplied by the department.*

## Retailing Minor

*Department of Business*

## Program Requirements

**21 credits are required.**

## Required Courses

- BUACT-206 Introduction to Financial Accounting
- BURTL-212 Trend Tracking and Forecasting
- BURTL-127 Basic Merchandising
- BURTL-327 Store Management

- BURTL-329 Retail Promotions
- BURTL-425 Current Retail Strategies for a Differential Advantage
- BURTL-390 Merchandise Planning and Control

## Sociology Minor

*Department of Social Sciences*

### Program Requirements

**21 credits are required.**

#### Required Courses

- ANTH-220 Cultural Anthropology
- SOC-110 Introductory Sociology
- SOCWK-205 Introduction to Social Work

#### Selectives

*Additional courses to complete 21 credits will be selected from the program plan sheet provided by the department.*

#### Note:

*A minimum grade of C- is required for each course in the minor with an overall grade point average of 2.5 in required courses. The three required courses and at least two selective courses must be completed at UW-Stout to fulfill the residency requirement.*

## Spanish Minor

*Department of Speech Communication, Foreign Language, Theatre and Music*

### Program Requirements

**24 credits are required.**

#### Required Courses

- SPAN-121 Practical Spanish I *and*
- SPAN-122 Practical Spanish II
- or*
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II
- SPAN-201 Intermediate Spanish I
- SPAN-202 Intermediate Spanish II

- SPAN-227 Spanish Composition and Conversation I
- SPAN-229 Hispanic Literature in America

Note:

*4-6 additional Spanish course credits approved by the Spanish adviser.*

## Studio Art Minor

### Introduction

The Studio Art Minor provides a foundation in visual literacy and creative problem solving within the context of the fine art studio. Students analyze art in historical and cultural context and apply principles of art and design in the production of artworks. This minor equips students to be creative, reflective, visually astute, and culturally aware.

A studio art minor requires a minimum of 24 credits. All course work must be A-F grade basis and completed with a "C" or better. A maximum of four courses from the major may "double count." Certain courses may be repeated for credit with authorization from advisor. A minimum of 12 credits within the minor must be completed at UW-Stout. Students may choose 1) a general Studio Art Minor, or 2) a concentrated Studio Art Minor.

### Program Requirements

*24 credits are required.*

### Required Courses (24 credits)

General Studio Art Minor

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations or
- ART-103 Three-Dimensional Design Foundations
- ARTH-222 Introduction to Art

### Selectives

**A minimum of 15 ART credits to be selected in consultation with your adviser, or choose 15 credits in a concentrated area.**

### Art Metals

- ART-215 Art Metals I
- ART-315 Art Metals II
- ART-415 Art Metal III

- ART-XXX Art Studio Selective

## Ceramics

- ART-213 Ceramics I
- ART-413 Ceramics II
- ART-XXX Art Studio Selective

## Drawing

- ART-200 Drawing II
- ART-300 Drawing III
- ART-301 Life Drawing I
- ART-401 Life Drawing II
- ART-XXX Art Studio Selective

## Painting

- ART-200 Drawing II
- ART-209 Painting I
- ART-409 Painting II
- ART-410 Painting III
- ART-XXX Art Studio Selective

## Printmaking

- ART-200 Drawing II
- ART-217 Printmaking I
- ART-417 Printmaking II
- ART-XXX Art Studio Selective

## Contemporary Sculptural Practices

- ART-211 Contemporary Sculptural Practices I
- ART-311 Contemporary Sculptural Practices II
- ART-411 Contemporary Sculptural Practices III
- ART-XXX Art Studio Selective

## **Supply Chain Management Minor**

*Business Department*



## Program Requirements

**22 credits required**

### Required Courses

- INMGT-305 Resource Planning and Materials Management
- INMGT-405 Resource Planning and Materials Management Practicum
- INMGT-320 Quality Tools
- BUMKG-337 Procurement, Sourcing and Supply Chain Management (3.00 cr.)
- INMGT-325 Quality Management
- BUSCM-338 Principles of Logistics

### Selectives

*Select at least 5 credits from the list of courses supplied by the department.*

## Sustainability Minor

*Biology and Engineering Departments*

## Program Requirements

**22-24 credits required**

### Required Courses (10 credits)

- BIO-111 Science, the Environment and Sustainability *or*
- BIO-141 Plants and People
- ENSC-425 Environmental Science and Sustainability Capstone *or*
- SUST-425 Sustainable Design & Development Capstone

### Group I Selectives (Minimum of 6 credits)

- AEC-191 The Built Environment
- AEC-460 Sustainable Construction
- APRL-167 Textiles I: Theory, Fibers and Structures
- DES-150 Introduction to Sustainable Design and Development
- DES-431 ID5: Industrial Design Senior Studio I
- PKG-150 Packaging Fundamentals
- RC-440 Environmental Leadership & Sustainable Management
- SUST-315 Sustainable Engineering
- SUST-432 Global Sustainability Experience in Design & Manufacturing

- TECH-230 Technology Dynamics

## Group II Selectives (Minimum of 6 credits)

- ANTH-290 Global Political Ecology *or*
- SOC-290 Global Political Ecology
- ANTH-293 Environmental Justice *or*
- SOC-293 Environmental Justice
- ECON-350 Environmental and Natural Resource Economics
- GEOG-310 Geography of Food
- LIT-275 Environmental Literature
- PSYC-281 Psychology for Sustainability

## Note:

*A minimum grade of "C" (2.0) is required in all courses. Students are highly encouraged to declare this minor before they obtain junior level status.*

## Tourism Minor

*Department of Hospitality and Tourism*

## Program Requirements

*24 credits are required.*

## Required Courses

- HT-140 Principles of Tourism
- HT-340 Development of Tourism Attractions
- HT-240 Tourism Goods and Services
- HT-440 Sociocultural Systems of Tourism
- HT-341 Geography of Tourism (3.00 cr.)
- HT-360 Tourism for Persons with Disabilities

## Select 4 credits from the following:

- FREN-101 Elementary French I
- FREN-102 Elementary French II
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II

Note(s):

*A comparable number of credits in a well-known language used in travel and trade may be substituted.*

## Selectives

*Five credits required.*

## Web Technology Minor

*Department of Apparel and Communication Technologies*

## Program Requirements

*21 credits are required.*

## Required Courses

- ICT-103 Information and Communication Technologies
- ICT-305 Information Systems for Enterprise
- ICT-311 Information and Communication Technologies Analytics
- ICT-375 Web Production and Distribution
- ICT-475 Dynamic Web Technologies
- ICT-485 Search Engine Optimization

## Women and Gender Studies Minor

*Academic and Student Affairs*

## Program Requirements

**18 credits are required.**

## Required Courses

- WGS-210 Introduction to Women and Gender Studies
- WGS-XXX Applied Research in Women and Gender Studies (1.00 cr.)

## Selectives (14 credits)

*Choose 6 or more credits from Level A. Remaining credits may be chosen from either Level A or Level B. No more than 9 credits can come from the student's major.*

## Level A

- ANTH-356 Gender in Cross Cultural Perspective
- ARTH-332 Gender and Art
- CSTEM-125 Gender and Science, Technology, Engineering and Mathematics
- HDFS-257 Lifespan Sexuality
- HDFS-320 Divorced, Single Parent and Remarried Family
- HDFS-350 Women's Relationships in Later Life
- HDFS-352 Sexual and Gender Identities in Families and Society
- HDFS-456 Abuse and the Family
- HIST-311 Women and War: A Global Perspective in the Modern Era
- HIST-321 United States Women's History
- INMGT-415 Inclusivity in Leadership
- INMGT-416 People Process Culture
- LIT-272 Women Writers
- PSYC-372 Psychology of Sex and Gender
- PSYC-375 The Psychology of Marriage and The Family
- SOC-275 Sociology of Gender Roles
- SOC-291 Sociology of Health and Illness
- WGS-398 Field Experience in Community Projects (1.00-3.00 cr.)
- WGS-399 Independent Study in Women and Gender Studies (1.00-3.00 cr.)
- WGS-XXX Applied Research in Women and Gender Studies (1.00 cr.)

## Level B

- APRL-211 History of Fashion-19th Century to Present
- BIO-130 Human Sexual Biology
- BURTL-417 Social/Psychological Aspects of Clothing
- EDUC-336 Multiculturalism: Issues & Perspectives
- HDFS-340 Human Development: Late Adulthood
- HDFS-341 Family Caregiving to Dependent Elders
- HDFS-345 Health Care Dilemmas & Decisions for Families
- HDFS-426 Special Topics in the Study of Family Life
- HDFS-440 Child and Family Law (3.00 cr.)
- LIT-303 Coming of Age in Literature and Film
- PHIL-220 Multicultural Philosophy
- PSYC-270 Social Cognition and Behavior
- PSYC-340 Psychology of Individual and Group Differences
- PSYC-350 Culture and Psychology
- PSYC-360 Personality Theories and Applications
- PSYC-370 Interpersonal Effectiveness Training

## Workplace Diversity Minor

*Department of Psychology*

## Program Requirements

*17-21 credits are required.*

### 1. Foundation

- PSYC-XXX Foundations of Workplace Diversity (3.00 cr.)
- SPCOM-312 Intercultural Communication

Choose one course from Area 2 and one course from Area 3.

### 2. Ethnicity/Race

- PSYC-340 Psychology of Individual and Group Differences
- HIST-322 African-American History
- HDFS-275 Race Matters: Interdisciplinary Investigations
- EDUC-336 Multiculturalism: Issues & Perspectives

### 3. Gender

- INMGT-415 Inclusivity in Leadership
- SOC-275 Sociology of Gender Roles
- HIST-321 United States Women's History
- HDFS-350 Women's Relationships in Later Life \*\*
- SRVM-120 Gender in Service Management (3.00 cr.)
- WGS-210 Introduction to Women and Gender Studies

Choose a course from two of the following areas (4-7):

### 4. Age

- HDFS-347 Ethics in Aging (2.00 cr.)
- HDFS-340 Human Development: Late Adulthood
- HDFS-350 Women's Relationships in Later Life \*\*
- REHAB-355 Rehabilitation of the Older Disabled Worker

### 5. Disability

- REHAB-230 Psychosocial Aspects of Disability
- HT-360 Tourism for Persons with Disabilities

## 6. Religion

- XXX-XXX Religious Issues in the Workplace (3.00 cr.)

## 7. Sexual Orientation (LGBTQ)

- HDFS-352 Sexual and Gender Identities in Families and Society

## 8. Capstone (required)

- PSYC-XXX Applied Diversity Organizational Strategies (3.00 cr.)

### Note(s):

*\*\* HDFS 350 may only be taken to count toward one area.*

## Specialization

### Introduction

Specializations are programs of study, with carefully constructed learning goals and experiences, and evaluation procedures. While course work may be included in a specialization, students may also work to meet learning goals through internships, working with a mentor, successfully completing a proficiency examination or certification examination, or other non-classroom experiences. Courses may come from several departments and involve faculty from several disciplines.

Courses taken to complete a specialization may also fit elsewhere in a student's program of study.

Students who complete a specialization will have the specialization recorded on their transcript and will receive a certificate of completion.

## Color Specialization

Color plays a major role in our daily lives, and the color industry holds a significant sector in business. Both national and international companies conduct color research on products such as textiles, paints, cars, and clothes. Color is also a growing area with developers in community and neighborhood design and remains an important component of marketing and packaging goods and ideas. In fact, major employers in the region hire employees to focus specifically on the color aspect of their industries. The Color specialization provides students with the opportunity to learn about the dynamic and complex field of color from a variety of disciplinary perspectives.

## Requirements for the Specialization

### Intended Outcome

1. Understand the science of perception of color.

2. Understand the psychology of color cognition and human perception.
3. Understand reproduction of color in print using current technology.
4. Understand color theory with applied exercises in a studio environment and to understand how broad-reaching color theories can evolve from diverse efforts to solve specific problems.
5. Understand systematic analysis, quantification, and/or measurement of color.  
*Choose one "systems" course:*
6. Understand color in an applied studio environment using varied media.

## Learning Activity

- PHYS-150 The Nature and Application of Light and Color \*
- PSYC-432 Perception \*
- CMG-367 Color Management \*
- ART-114 Color Studio \*
- ART-414 Color Seminar \*
- BURTL-212 Trend Tracking and Forecasting \*
- CHEM-335 Instrumental Methods of Analysis \*
- MFGT-204 Polymer Processes \*
- MFGT-251 Fundamentals of Plastics Materials and Processing \*

Choose one "materials" course:

- APRL-145 Interior Decorating/Design Textiles \*
- APRL-167 Textiles I: Theory, Fibers and Structures
- ART-209 Painting I \*
- ART-217 Printmaking I \*

## Evaluation

\*Exams, papers, projects, reports, grade of C or better.

## Gerontology Specialization

The populations of the United States and the world are growing older, precipitating important changes in health and social policies. At present, one in eight Americans are 65 or older. These growing numbers will increase demand for individuals with gerontological skills and knowledge. The Gerontology Certification requires 20 credits, or equivalent, and includes a required core and practicum through which students study aging as an interactive process of physical, social and psychological forces. Two credits of field experience with aging-related content will be required in the student's own major area of study.

## Requirements for the Specialization

### Intended Outcome

The following outcomes will be achieved through required courses:

1. Identify major biological theories of aging.
2. Identify and describe the biological changes associated with aging.
3. Recognize normal and pathological changes that occur in organ systems with age.
4. Comprehend the social, political and economic aspects of aging.
5. Recognize and discard stereotypes associated with aging.
6. Work in direct or indirect service to the older population.

The following outcomes may be achieved through the student's selection of elective courses:

7. Understand lifespan concept of development and demonstrate an integrated knowledge of the aging individual within the context of family.
8. Understand the reciprocal nature of family caregiving.
9. Understand the process of grief for older adults.
10. Recognize personal and cultural attitudes toward death.
11. Identify and understand the ethical issues related to health care for the elderly.
12. Demonstrate ability to plan and develop nutritious meals and programs for older individuals which take into account physical and financial limitations.
13. Assist aging individuals, especially those with physical limitations, to find suitable and aesthetically pleasing clothing. Understand the product needs of older consumers and the promotional strategies used to market to this population.
14. Understand counseling approaches and techniques for working with aging families in order to construct models for counseling older individuals and their families.
15. Assist older individuals and their families with financial planning.
16. Identify the effects of exercise upon an older individual.
17. Explain the psychological and physiological dimensions and impact of disability from a developmental perspective.
18. Identify needs and difficulties unique to older disabled workers.
19. Identify formal support systems available to older persons with special needs or national, state and local needs.
20. Explain various understandings of the meaning of aging as portrayed in literature.
21. Identify architectural barriers confronted by the disabled traveler.
22. Understand the range of technological options available to assist frail and/ or disabled elderly.
23. Identify and describe absorption and metabolism of medications in the elderly.

## Learning Activity

- BIO-125 Biology of Aging \*
- HDFL-340 Human Development: Aging Person (3.00) \*
- Field Experience \*\*
- HDFL-255 Lifespan Human Development (3.00 cr.) \*
- HDFL-341 Family Caregiving to Dependent Elders (1.00 cr.) \*
- HDFL-425 Death Education and Counseling in Families (2.00 cr) \*
- HDFL-351 Death and the Family (1.00 cr.) \*
- HDFL-345 Health Care Dilemmas and Decisions for Families (2.00 cr.) \*
- FN-405 Nutrition for the Aged (2.00 cr.) \*
- BURTL-335 Special Topics in Retail Merchandising and Management \*
- COUN-494 Counseling Older Persons \*
- HT-488 Financial Planning for Retirement (2.00 cr.) \*
- HLTH-365 Physiology of Exercise \*
- BIO-220 Physiology of Disabilities \*
- REHAB-230 Psychosocial Aspects of Disability \*
- REHAB-682 Sexuality and Disability (2.00 cr.) \*
- REHAB-355 Rehabilitation of the Older Disabled Worker \*
- REHAB-458 Rehabilitation Support System Networking (2.00 cr.) \*
- LIT-450 Aging in Literature (3.00 cr.) \*



- HT-360 Tourism for Persons with Disabilities \*
- REHAB-360 Assistive Technology \*
- BIO-358 Introductory Pharmacology \*

## Evaluation

\*Exam, papers, reports 2.0 grade point average

\*\*Evaluation of field experience

## Golf Enterprise Management Specialization

This specialization will prepare students for careers in the management of golf operations. Students will demonstrate their knowledge and skills through applied activities and assessment of theoretical principles, benefiting from the "hands on, minds on" approach to learning. The specialization will enhance degree programs in General Business Administration; Hotel, Restaurant and Tourism Management; and Service Management as well as the professional careers of persons seeking employment in the golf industry. This specialization is supported by the golf industry to address the need for employees with knowledge of the industry and the skills required to manage the many aspects of a golf-related business.

## Requirements for the Specialization

**18-22 credits required.**

## Intended Outcome

Students will be able to:

1. Understand major trends in the golf industry, including tourism, consumer interests, course ownership and management, and golf retail business.
2. Distinguish missions of principal national and international associations in the golf industry.
3. Understand golf facility operations from perspectives of resort, private, municipal, and daily fees courses.
4. Understand basic business principles as applicable to golf enterprise management.
5. Understand issues and strategies for developing new customers and retention of past customers of golf operations.
6. Develop basic golf skills.
7. Integrate the knowledge and skills obtained in the courses in the Golf Enterprise Management specialization through a practical experience in the golf industry.

Based upon the selective courses chosen the student will be able to:

8. Explain the concepts of raising, allocating and controlling capital for business entities; analyze the income tax system and its relevance with business decisions; analyze financial data to make investment decisions.
9. Develop a business plan that addresses the strategies required to start a small business including legal and financial aspects.
10. Demonstrate an understanding of the retail, wholesale, advertising, channels of distribution from perspectives of manufacturer to customer.
11. Analyze the retailing process, the environment within which it operates, and the institutions and functions that are performed.
12. Integrate the principles of golf resort planning and operation from the aspects of the resort concept, master planning, environmental impact, facility design, maintenance and operational management.
13. Evaluate diversified natural and man-made background tourism elements (BTE) and the preservation and incorporation of these concepts for development of tourism destinations.

14. Understand management of golf club operations from perspectives of customer service for membership, personnel, marketing, and financing.
15. Evaluate the factors involved in developing and managing a golf property including the feasibility, financing, appraisal, leases, purchase agreements and management contracts.
16. Develop interpersonal communication attitudes and skills for effective business practices.
17. Understand consumer behavior from the perspectives of psychological theories and principles.
18. Understand basic public relations strategies for community, employee, customer, and media applications.
19. Understand theories and techniques for effective management of personnel.
20. Examine the environment in which service operations such as golf operate from the perspective of both the customer and operations management.
21. Analyze the service management strategies used in the golf industry as contrasted with other economic sectors.
22. Evaluate how national and cultural constraints and expectations impact planning, execution, and evaluation of service quality in the golf industry.

## Learning Activity

### Required courses: 9-12 credits

- GEM-101 Introduction to Golf Enterprise Management \*
- GEM-201 Principles of Golf Enterprise Management \*
- GEM-301 Customer Development, Retention and Marketing \*
- PE-129 Golf \*
- XXX-XXX Co-op or field experience in a golf enterprise venue (1.00-4.00 cr.) \*\*

### Selective courses: 9-13 credits

- BUFIN-340 Business Finance \*\*\*
- BUMGT-480 Entrepreneurship: Small Business Planning \*\*\*
- BUMKG-330 Principles of Marketing \*\*\*
- BURTL-127 Basic Merchandising \*\*\*
- HT-330 Resort Planning and Operation \*\*\*
- HT-340 Development of Tourism Attractions \*\*\*
- HT-352 Club Management \*\*\*
- PM-371 Commercial/Residential Property Development and Management \*\*\*
- PSYC-370 Interpersonal Effectiveness Training \*\*\*
- PSYC-377 Consumer Psychology \*\*\*
- PSYC-379 Public Relations \*\*\*
- PSYC-382 Human Resource Management \*\*\*
- INMGT-210 Service Operations Management \*\*\*
- SRVM-354 Services Marketing Management-Ht \*\*\*
- SRVM-420 International Service Concepts \*\*\*

## Evaluation

\*Successful completion of required courses with a grade of "C" or better.

\*\*Successful completion of co-op or internship with a grade of "C" or better. The student will be evaluated by the employer and a

faculty mentor. The student will complete a final report that provides a general overview of the golf enterprise venue including its policies and procedures, a description of the job duties performed, the relationship of the courses in the specialization to the experience and a self evaluation of performance in the position.

\*\*\*Successful completion of selective courses with a grade of "C" or better.

## **Health Science Occupations Education Specialization**

This specialization is intended for licensed secondary teachers who are teaching or interested in teaching health science occupation (HSO) related coursework. Individual school districts determine the licensure needed by an individual teaching HSO related coursework. Completion of the specialization does not result in Wisconsin Department of Public Instruction certification. Courses are offered online. The field experience will take place in a health care facility.

### **Requirements for the Specialization**

**12 credits required**

#### **Intended Outcome**

Demonstrate knowledge, understanding, and competence in the following:

1. The demands and responsibilities of working in a health care facility
2. National Health Care Skill Standards
3. Curriculum planning in health science occupations
4. Organizational structure and administration of health care and role of health care professionals
5. Student career development
6. Organization and supervision of work-based learning

#### **Learning Activity**

- CTE-398 Field Experience \*
- CTE-310 Foundations of Health Sciences Occupations Education \*
- CTE-320 Careers in Health Care \*
- CTE-330 Curriculum Planning in Health Science Occupations \*
- CTE-360 Coordination of Work-based Learning (WBL) Programs \*

#### **Evaluation**

\* Successful completion of courses is required. Artifacts for the professional portfolio are identified on course outlines.

## **International Studies Specialization**

As the world moves toward the 21st century, people in all countries and cultures are increasingly interacting with each other. Many UW-Stout graduates find work in multinational businesses and international tourism. Others go into the Peace Corps or other types of international volunteer work. Many more use their leisure time for travel or study abroad. Even those who never venture abroad find their professional, civic and personal lives impacted by the expansion of international relationships. The International Studies specialization at UW-Stout is flexibly designed to offer students an opportunity to better understand other cultures and international relationships, and to compete more successfully in the workplace. The specialization requires

all students to complete six core courses or their equivalents, then select an option that best meets their interests and needs. All students in the specialization are strongly encouraged to plan work or study experience abroad.

## Requirements for the Specialization

### Intended Outcome

#### **1.0 Demonstrate an understanding of international relations.**

- 1.1 Show an understanding of concepts used to analyze international relations.
- 1.2 Identify participants and patterns of international relationships.
- 1.3 Identify and analyze global problems arising from international relations.

#### **2.0 Demonstrate an understanding of cultural variation and analysis, or demonstrate an understanding of the modern world within its historical context.**

- 2.1 Show an understanding of concepts used to analyze cultural variation or develop an introductory knowledge of the modern world based on its historical antecedents.
- 2.2 Identify and begin to understand the complexity of cultural and political variations that exist in the world.
- 2.3 Demonstrate a cross-cultural approach to analyzing international problems. ANTH-220 Cultural Anthropology *or*

#### **3.0 Demonstrate an understanding of the geography and peoples of the world.**

- 3.1 Illustrate an understanding of geographical concepts.
- 3.2 Identify the major components of the physical setting in which cultures exist and international relations occur.
- 3.3 Identify and analyze the relationships between the physical world, on the one hand, and cultural variation and international relations on the other.

#### **4.0 Demonstrate an introductory knowledge of a second language.**

#### **5.0 Demonstrate an introductory knowledge of the history, culture and/or social institutions of a country or region other than one's own.**

#### **6.0 Demonstrate an introductory knowledge of intercultural communications.**

#### **7.0 Demonstrate the integration of knowledge with experience in another country or culture.**

- 7.1 Study or work in another culture.
- 7.2 Show an appreciation of the diversity in cultural values from culture to culture.
- 7.3 Demonstrate an integration of intercultural experiences with other knowledge about international relations.

### Learning Activity

- POLS-340 International Relations \*
- HIST-210 Modern World \*
- GEOG-104 World Geography \*
- XXX-XXX Language Studies (8.00 cr.) \*\*  
Equivalent of 8 credits of college-level study of one foreign language. High school language study may count towards this requirement. (*International students consult with specialization adviser.*)
- XXX-XXX Area Studies (2.00-3.00 cr.) \*  
(*See specialization advisor for a list of acceptable courses focusing on one country or cultural region of the world.*)
- SPCOM-312 Intercultural Communication \* *or*
- BUINB-346 Seminar \*
- XXX-XXX Study Abroad/International Field Experience or Co-op or Internship (1.00-2.00 cr.) \*  
(*Approved Independent Study/Practical International Experience.*)

## Specialized Learning Objectives

### Option 1: International Business

1.1.0 Demonstrate an understanding of international business practices.

1.1.1 Demonstrate an understanding of international trade, development, marketing, finance business law, management and/or transportation.

Select 9 credits from the following:

- BUINB-260 International Business \*
- ECON-480 International Economics \*
- BUINB-338 International Logistics \*
- BUINB-485 International Marketing \*
- BUINB-489 International Business Policies \*
- BUINB-488 International Business Practicum \*
- BUINB-367 International Management \*

### Option 2: International Tourism

2.1.0 Demonstrate a knowledge of the international components of the tourism industry.

2.1.1 Identify the economic role of tourism in a global economy.

2.1.2 Identify the role of government in planning/development of tourism.

2.1.3 Analyze current issues related to international tourism.

2.1.4 Analyze/become familiar with hospitality and tourism publications.

2.2.0 Assess quality and quantity of selected tourism resources throughout the world.

2.2.1 Analyze spatial patterns of connection, circulation, interaction, transportation and communication associated with the geography of tourism.

2.2.2 Analyze international tourism's locational trends.

2.2.3 Illustrate world map reading skills related in tourism

2.3.0 Analyze current tourism topics.

Select 7-9 credits from the following:

- HT-140 Principles of Tourism \*
- HT-440 Sociocultural Systems of Tourism \*
- HT-481 Special Problems in Hospitality and Tourism \*

### Option 3: Language Studies

3.1.0 Demonstrate the ability to communicate in a second language.

Select 16 credits from the following:

(8 additional credits in the same language as the core requirement.)  
Equivalent of two years of college-level study in the same foreign language.

## Option 4: Area Studies

4.1.0 Demonstrate an understanding of the history, cultural background and social institutions of a culture, country or region other than one's own.

Select 8-9 credits from the following:

- EDUC-336 Multiculturalism: Issues & Perspectives \*
- EDUC-376 Cross-Cultural Field Experience \*
- EDUC-400 Workshop: Special Topics In Education \*
- EDUC-402 Global Perspectives for Educators
- REHAB-305 Sign Language I \*
- REHAB-306 Sign Language II \*
- XXX-XXX Foreign language taken at Stout (*FREN, GER, HMON, SPAN*) or other foreign languages transferred in (2.00-4.00) \*
- LIT-273 American Multicultural Literature \*
- PHIL-220 Multicultural Philosophy \*
- BUINB-260 International Business \*
- SOC-375 Sociology of Minority Groups \*
- XXX-XXX Student teaching, co-op, field experience or independent study (3.00-4.00) \*

## Option 5: International Education

- 5.1.0 Illustrate an understanding of the sociopolitical elements of education in a global context.
- 5.2.0 Demonstrate an understanding of the role of education in building a community of learners for a shared global future.
- 5.3.0 Show a receptivity to multicultural perspectives.
- 5.4.0 Demonstrate an awareness and understanding of the global condition and of global developments and trends.

Select 8-9 credits in addition to the core area studies requirement:

Specialization adviser-approved courses focusing on one country, one ethnic/cultural group or cultural region of the world. (*For example, the following courses could serve as an "area studies" grouping: HMON-121 and -122 Practical Hmong I and II; SOC-350 Sociology of Hmong Culture; and ANTH-240 Hmong Studies and Contemporary Life. These courses would total 8 credits.*)

## Option 6: Apparel Design and Development; Retailing

- 6.1.0 Demonstrate an understanding of international economic trends influencing textiles and apparel-related areas.
- 6.2.0 Illustrate an understanding of international historical influences on present day fashion
- 6.3.0 Analyze international sourcing and marketing strategies for apparel products and manufacturing.
- 6.4.0 Demonstrate an understanding of international business practices through formal course work.

Select 9-12 credits from the following:

- BURTL-319 International Economic Trends in Textiles and Clothing \*

- APRL-211 History of Fashion-19th Century to Present \*
- BURTL-417 Social/Psychological Aspects of Clothing \*
- APRL-405 International Study Tour to the Fashion Industry \*
- BUINB-260 International Business \*
- BUINB-367 International Management \*
- BUINB-485 International Marketing \*

## Evaluation

\*Exams, papers and reports - 2.0 grade point average.

\*\**For Language Studies, certification of proficiencies may be obtained from the language faculty.*

## Professional Writing Specialization

The Professional Writing specialization addresses an area of critical importance in business and industry: communicating information clearly and precisely. The specialization is intended for those who wish to gain professional writing skills to help them find employment and those who wish to improve their writing skills to gain promotions or explore new career directions. Graduates of the Professional Writing specialization will be able to clarify technical concepts for a wide range of audiences, especially non-technical ones. This specialization can be completed entirely online.

## Requirements for the Specialization

### Intended Outcome

1. Understand and implement basic professional writing concepts and strategies.
2. Interact with clients to produce their documents. Follow a sequence of activities, under supervision, to produce a document, starting with an initial interview and progressing to a final document.
3. Design documents according to client specifications. Learn basic principles of document design. Determine client's design needs. Produce document.
4. Adapt, direct, and produce information for a particular audience with particular technologies. Structured sequence of activities that train students in concepts of audience adaptation and develop flexibility in adapting to audience. Demonstrated successful course completion.
5. Organize and present written material in a clear, concise manner with an emphasis on rhetorical context and strategy. Structured sequence of activities that train students in organizing for a particular audience situation. Demonstrated successful course completion.
6. Produce information according to business and industry standards of style. Structures sequence of activities that train students in style concepts and flexibility.

### Learning Activity

ENGL 415 is a required course for the Professional Writing specialization and is a prerequisite for many upper level courses. Students must take this course during their first semester of work in the Professional Writing specialization.

- ENGL-415 Technical Writing \*

Take three credits from the following:

- ENGL-121 Introduction to Professional Communication \*
- ENGL-210 Journalism Practicum \*
- ENGL-349 Cooperative Education Experience \*
- ENGL-437 Technical Writing Practicum \*
- ENGL-471 Professional Communication Capstone \*

Take three credits from the following:

- ENGL-361 Hypertext Writing \*
- ENGL-385 Document Design \*
- ENGL-435 Writing Technical Manuals \*

Take three credits from the following:

- ENGL-388 Writing for the Internet
- ENGL-361 Hypertext Writing
- ENGL-425 Usability Design and Testing
- ENGL-430 Writing for Content Management
- ENGL-435 Writing Technical Manuals

Take three credits from the following:

- ENGL-247 Critical Writing
- ENGL-371 Rhetoric and Style: Strategies of Argumentation

Take three credits from the following:

- ENGL-125 Professional Writing Elements of Style
- ENGL-207 Writing for the Media
- ENGL-225 Editing Processes and Practices  
(Prerequisite for ENGL 225: Test out or take ENGL 125)

## Evaluation

\*Demonstrated successful course completion.

## Training and Human Resource Development Specialization

Education is not the sole province of schools. Programs of instruction are conducted by many businesses, industries, in the military, and by other groups and organizations. Planning and providing this instruction is the province of professionals usually identified as "trainers." In our technological society, training programs have become increasingly complex and demands on trainers have increased. Greater expertise on their part is required. This all-university specialization addresses needs for preservice and in-service education for trainers.



This program is intended for students who have expertise in areas such as engineering, technology, education, business, government, military and labor, and who desire to become involved in development and implementation of training programs. Contact the specialization director for further information.

## Requirements for the Specialization

**Note:** *Courses numbered 700 and greater are open to graduate students only.*

### Intended Outcome

1. Introduction to concepts of training and human resource development.
2. Design and develop training activities.
3. Implement and facilitate training activities.
4. Evaluate the effectiveness of training activities.
5. Apply concepts of training in the professional area.

### Learning Activity

- TRHRD-360 Training Systems in Business and Industry \*

Select one of the following:

- CTE-370 Instructional Technology - Education and Training
- INMGT-400 Organizational Leadership \* *or*
- PSYC-382 Human Resource Management \*

Complete a course from the appropriate school in curriculum development or course construction (2-3 credits) such as:

- MBE-401 Marketing Education Curriculum \*\*
- CTE-438 Course Construction in Career and Technical Education \*\*

Select one of the following:

- MBE-301 Marketing and Business Methods and Formative Assessment \*\*\*
- TRHRD-370 Training Methods in Business and Industry \*\*\*
- CTE-405 Methods of Teaching Career and Technical Education \*\*\*

Additional Courses:

- CTE-440 Instructional Evaluation in Career and Technical Education \*\*\*\*
- TRHRD-XXX Co-op/Internship in Training (1.00-8.00 cr.) \*\*\*\*\*

## Evaluation

\*Successful completion of courses (*6 credits*).

\*\*Successful completion of courses (*minimum 4 credits*).

\*\*\*Successful completion of a course (*minimum 2 credits*).

\*\*\*\*Successful completion of the course (*2 credits*).

\*\*\*\*\*Successful completion of the contractual agreement of the internship as evaluated by the business, industry, government or military supervisor, and the UW-Stout supervisor. Completion of a field report is required.

## Vocational Evaluation/Rehabilitation Technology Specialization

The impact of technology has changed assessment and service delivery in the field of rehabilitation. A philosophical shift to a more empowering stance with persons with disabilities has occurred as a result of the evaluation of their skills and abilities and the enhancement of those skills through assistive technology. This specialization educates and trains vocational rehabilitation professionals and students in skills to meet the needs of people with disabilities, and to provide the services that are being demanded by employers, as well as persons with disabilities for use in the labor market and in accordance with the Americans with Disabilities Act.

## Requirements for the Specialization

### Intended Outcome

**Development of tool modification and accommodation:** demonstrate familiarity with and use of testing accommodations or modifications to facilitate the vocational exploration of persons with disabilities through the modification of tests, work samples, job sites and training materials, as appropriate.

**Communication of rehabilitation plan objectives and recommendations:** demonstrate the ability to incorporate the potential of assistive technology to enhance performance potential in the vocational choices of persons with disabilities.

**Vocational rehabilitation process and philosophy:** outline and describe philosophical movements associated with vocational rehabilitation in the United States, describe the role of vocational rehabilitation/assessment in a diverse cultural environment, and describe the need that persons with disabilities have to be a part of society, focusing on strengths and assets that people bring with them to any situation.

**Occupational Information:** find and use various sources of national, state and local occupational information; link rehabilitation recommendations to the local labor market of the person being served.

**Functional aspects of disability:** develop knowledge of the functional characteristics of disability and understand the impact of evaluating the skill and abilities of a person with a disability.

**Individualized vocational rehabilitation/evaluation planning:** identify and delineate the individual needs of a person with a disability; state those needs in a plan for testing skills and abilities in relation to the accomplishment of a task or goal.

**Vocational interviewing:** demonstrate the development of rapport, provision of agency and assessment information, initial identification of client strengths and limitations through the vocational interview; and create an understanding of the process of vocational rehabilitation through the vocational interview.

**Vocational report development and communication:** interpret, analyze, and synthesize participant data in a coherent and concise manner that addresses needs, strengths, and assets of the participant and develops pertinent recommendations through a report shared orally and in writing with the participant/client and referral source/rehabilitation counselor.

**Standardized testing:** become familiar with the procedures for administering and interpreting standardized tests and application of tests to persons with disabilities, understand the impact of the disabling condition and the use of the most appropriate test, and develop a report explaining the impact of testing and using results with a vocational rehabilitation report.

**Job and Training Analysis:** perform a job analysis and develop a training analysis on a given job and do a written report; use the job analysis to determine the most appropriate evaluation tools to use with a person with a disability to measure performance ability; determine appropriate training or education to prepare for the job.

**Functional Skills:** use appropriate tools and strategies to evaluate the functional daily living skills of an individual with a disability, select appropriate method to determine level of functional skill, develop and use situational assessment to establish an understanding of the individual functional skills of a person with a disability.

**Assessment of Learning:** demonstrate awareness of learning styles and modalities of teaching through use of selected tests, modify test administration to the demands of the learning/teaching situation.

**Work samples and work sample systems:** demonstrate appropriate use of work samples and work sample systems as means of assessment within a given occupation, demonstrate appropriate use of work samples and systems with different types of disabling conditions.

**Behavioral Observation:** observe and note behaviors of individuals during the assessment process as asset or limitation behaviors in relation to the accomplishment of a target goal.

## Learning Activity

- "The Use of Assistive Technology" workshop, resulting in a report detailing the use and modification of testing strategies *or* \*
- REHAB-360 Assistive Technology \*
- "The Use of Assistive Technology" workshop, resulting in reports that include recommendations for the use of assistive technology *or* \*
- REHAB-360 Assistive Technology \*
- Research paper describing process and philosophy *or* \*\*
- Demonstrated work experience of three or more years and professional development credentials *or* \*\*
- REHAB-101 Introduction to Rehabilitation \*\*
- Demonstrate work experience as a job developer or placement specialist of two or more years *or* \*\*\*
- "Job Development and Placement and Occupational Information" workshop resulting in appropriate work recommendations in a written report *or* \*\*\*
- REHAB-310 Vocational Assessment Applications in Rehabilitation *or* \*\*\*
- REHAB-410 Job Placement Processes \*\*\*
- Research paper on effect of disabling condition(s) in vocational rehabilitation *or* \*\*\*\*
- Test out with faculty-developed standardized test *or* \*\*\*\*
- REHAB-230 Psychosocial Aspects of Disability \*\*\*\*
- "Rehabilitation Planning" workshop resulting in written vocational rehabilitation plan *or* ♦
- Work experience of two or more years, one letter of reference from a supervisor, three letters of reference from professional referral sources, and five letters of reference from consumers of services *or* ♦
- REHAB-310 Vocational Assessment Applications in Rehabilitation ♦

- "Vocational Interviewing and Facilitating Career Decision Making with Clients" workshop resulting in the videotaping of a vocational interview *or* ♦♦
- Demonstrate evidence of past work experience as a vocational counselor for two or more years *or* ♦♦
- Complete college level course work in vocational interviewing ♦♦
- "Vocational Rehabilitation Report Development and Communication" workshop *or* ♦♦♦
- Four written reports addressing needs of four case studies presented during the workshop *or* ♦♦♦
- REHAB-310 Vocational Assessment Applications in Rehabilitation ♦♦♦
- Previous college course work in the use of psychometric testing and principles of validity and reliability *or* ♦♦♦♦
- "Standardized Testing" workshop and paper describing use of standardized tests with persons with disabilities *or* ♦♦♦♦
- Past work experience of two years or more where responsibilities include administering and interpreting standardized tests with a supervisor's letter and at least one referral source/rehabilitation counselor *or* ♦♦♦♦
- REHAB-420 Psychological Testing of Individuals with Disabilities ♦♦♦♦
- Read *A Guide to Job Analysis* or *The Revised Handbook for Analyzing Jobs*, participate in an online discussion of the materials and procedures of job analysis, select a job in the community that reflects occupational choices of agency participants, prepare a job analysis report, select and describe evaluation tools most appropriate for someone interested in the occupation *or* •
- REHAB-410 Job Placement Processes •
- "Functional Skills Assessment" workshop and report *or* ••
- Demonstrate evidence of past work experience of two or more years involving vocational evaluation/ functional skills assessment and/or situational assessment with two letters of reference from referral sources *or* ••
- REHAB-470 Work Adjustment Services ••
- Previous college-level course work in educational psychology, special education, adult or vocational education that address issues of learning and learning styles and use of learning assessments *or* •••
- Paper describing learning styles and assessment of such styles, with assessment tool selection and modification •••
- "Work Sample and Work Sample Systems" workshop and research paper *or* ■
- REHAB-310 Vocational Assessment Applications in Rehabilitation ■
- Read appropriate, assigned material and develop a written behavior observation of five clients where observations were critiqued by at least two other professionals, including the referring counselor *or* ■■
- Demonstrate evidence of work experience in vocational rehabilitation/evaluation where duties included writing and/or noting behavioral observations, with a letter from a supervisor and two from referral sources attesting to accuracy and usability of the written behavioral observations, including examples of written behavioral observations ■■

## Evaluation

\* Faculty review and approval of report on use and modification of evaluation tools *or* Grade of "C" or better

\*\* Faculty review and approval of research paper or work experience and professional credentials *or* Grade of "C" or better

\*\*\* Faculty review of work experience or faculty review and approval of report recommendations *or* Grade of "C" or better

\*\*\*\* Faculty review and approval of research paper *or* 80 percent or better on the standardized test *or* Grade of "C" or better

◆ Faculty review and approval of written rehabilitation plan of three separate case studies provided during workshop *or* Faculty review and approval of work experience and letters of reference *or* Grade of "C" or better

◆◆ Faculty review and approval of videotaped vocational interview *or* Faculty review and approval of work experience *or* Faculty review and approval of college level course work

◆◆◆ Faculty review and approval of the written report options and letters of reference *or* Grade of "C" or better

◆◆◆◆ Faculty review and approval of previous course work *or* Faculty review and approval of workshop paper *or* Faculty review and approval of work experience and letters of recommendation *or* Grade of "C" or better

• Faculty review and approval of the job and training analysis report and online discussion *or* Grade of "C" or better

•• Faculty review and approval of report *or* Faculty review and approval of work experience and letters of reference *or* Grade of "C" or better

••• Faculty review and approval of course work *or* Faculty review and approval of paper

■ Faculty review and approval of research paper *or* Grade of "C" or better

■□ Faculty review and approval of observations, critiques and reports *or* Faculty review and approval of work experience, letters of reference, and examples of written behavioral observations

## Professional Development Certificate

### Introduction

UW-Stout offers professional development certificate programs in addition to its traditional majors and minors to meet the needs of those who wish to obtain additional knowledge and skills needed for personal growth and professional advancement.

While not a substitute for a degree or diploma, the certificate is an alternative credential for individuals seeking to obtain new knowledge and skills or to update their knowledge and skills in a specific area. Typically, a certificate is earned by completing a set of limited, well-defined learning outcomes focused on new or emerging processes or new knowledge and principles applied to practical problems or issues.

These course sets lead to a certificate only. If you're interested in a bachelor's degree, please refer to the degree programs found elsewhere in this bulletin.

Additional information about professional development certificate programs is available online at [www.uwstout.edu/programs/pdc](http://www.uwstout.edu/programs/pdc).

## Applied Ethics Certificate

The Applied Ethics certificate is designed to empower professionals to apply ethical theory and reasoning in the workplace. The "ethical workplace" has emerged as an attainable ideal; understanding that ethics underscores all personal and professional interactions is essential to leaders in every profession.

Our approach is to bridge disciplines and professions in a systematic exploration and analysis of ethical issues facing individuals across professions and cultures. The program provides a core which introduces students to ethical principles, frameworks, and models. Courses cover engagement in ethical debate in a multicultural and globally diffused environment, encouragement of individual, professional, and civic responsibility to promote ethical leadership and enables students to provide coherent and compelling reasons justifying personal ethical stances and decisions.

Twelve credits are required for the Certificate. Students must maintain a "C" or higher in each of the four courses in order to be given credit toward the certificate.

### Required Courses:

- PHIL-235 General Ethics
- XXX-XXX Capstone Experience (3.00 cr.)

### Additional Courses:

*Students will choose 6 additional credits from an approved listing to complete certificate requirements. See the website at [www.uwstout.edu/programs/pdc/ae.cfm](http://www.uwstout.edu/programs/pdc/ae.cfm).*

## Autism Spectrum Disorder Specialist Certificate

The Autism Spectrum Disorder Specialist certificate is designed to provide teachers, counselors, and other professionals with specialized training in working with students with autism. Graduates possess skills needed to assess students with ASD, implement individualized interventions, and evaluate programs for effectiveness.

### Required Courses

- SPED-472 Foundations of Autism Spectrum Disorder
- SPED-473 Behavioral Interventions and Positive Behavior Supports
- SPED-474 Augmentative Communication and Social Skills
- SPED-475 Assessment and Methodology of Autism Spectrum Disorder

## Cisco Certified Network Associate Exam Preparation Certificate

The Cisco Certified Network Associate (CCNA) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

### Required Courses:

- ITM-131 Network operating System Fundamentals (2.00 cr.)
  - ITM-133 Networking Fundamentals I
  - ITM-134 Networking Fundamentals II
  - ITM-143 Networking Fundamentals III (2.00 cr.)
  - ITM-144 Networking Fundamentals IV (2.00 cr.)
- Exam:** Cisco CCNA

## Cisco Certified Network Professional Exam Preparation Certificate

The Cisco Certified Network Professional (CCNP) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

## Required Courses

- ITM-441 Scalable Internetworks  
**Exam:** Cisco Routing
- ITM-442 Remote Access Networks  
**Exam:** Cisco Remote Access
- ITM-443 Multi-Layer Switched Networks  
**Exam:** Cisco Switching
- ITM-444 Internetwork Troubleshooting  
**Exam:** Cisco Support

## Creative Writing Certificate

The Creative Writing Certificate provides participants with expertise in areas of effective creative writing to meet a range of written communication and problem solving responsibilities in business, industry, and education. Participants must complete the following courses with a B or better to earn the certificate:

## Required Courses

### Tier One - Required

- ENGL-425 Usability Design and Testing
- ENGL-342 Creative Writing II

### Tier Two - Choice of two courses

- ENGL-356 Creative Writing Workshop (6.00 cr.) (*repeatable*):
  1. Advanced Fiction Writing
  2. Advance Poetry Writing
  3. Advanced Creative Nonfiction Writing

### Tier Three - Choice of one

- ENGL-371 Rhetoric and Style: Strategies of Argumentation *or*
- ENGL-388 Writing for the Internet

### Tier Four - Capstone Seminar

- ENGL-471 Professional Communication Capstone

## Enterprise Technology Certificate

Enterprise technologies are umbrella systems with common data organization, storage, and data analysis tools interconnected through a computing network. The certificate provides participants with knowledge of the uses and impacts of enterprise technology in accordance with contemporary business practices. Professionals develop relevant understanding of policy, issues, and standards and implications on national and global communities.

### Required Courses

- ICT-305 Information Systems for Enterprise
- ICT-401 Information Technology Policy And Audit
- ICT-405 Enterprise Technology Seminar

## Event and Meeting Management Certificate

The Event and Meeting Management certificate is designed to teach the skills and knowledge base necessary to be successful in the events and meetings industry. The certificate will help students understand the key areas of the industry and to possess the knowledge to manage meetings, events, and trade shows. The certificate will set the ground work for students and professionals working towards the Certified Meeting Professional (*CMP*) designation.

### Required Courses

- HT-357 Hospitality Convention/Meeting Planning (3.00 cr.)
- HT-442 Trade Show Management
- HT-445 Event Management *or*
- HT-447 International Convention and Meeting Management

## Health Communication Certificate

### Introduction

Employment opportunities and high levels of placement in desired career fields for individuals with health communication training will continue to grow in response to the nation's needs and resources devoted to health issues. Through the coursework, those who earn the Health Communication certificate will be able to create effective health messages through user-centered communication strategies, evaluate the relationship between communication and health-related outcomes for individuals and populations, evaluate the influences of culture on the effectiveness of health communication, analyze user perspectives in accessing health information, and apply principles and theories to research and practice.

This certificate offering serves place-bound, working communication professionals who are employed in health-related contexts. Students would have earned a baccalaureate degree and are seeking further professional development. Students would not need to be degree-holder in a communications field. Other interested students would be future health professionals interested in coursework beyond their clinical education. Courses are offered online.



## Program Requirements

### Core Courses (6 credits)

- ENGL-370 Developing Health Messages
- SPCOM-370 Communicating in Health Contexts

### Electives (3 credits)

*Choose one of the following:*

- ENGL-470 Special Topics in Health Communication
- SPCOM-470 Special Topics in Health Communication
- SOC-291 Sociology of Health and Illness
- SPCOM-312 Intercultural Communication

### Capstone (3 credits)

*Students will complete a research-based project or a work experience-based project.*

- ENGL-475 Applied Health Communication Capstone or
- SPCOM-475 Applied Health Communication Capstone

## Human Resource Management Certificate

The Human Resource Management certificate program provides a broad base of knowledge to professionals seeking to expand their management competencies. The coursework is essential to prepare for the Professional Human Resource (*PHR*) exam, developed by the Society for Human Resource Management (*SHRM*) and recognized nationally as a significant credential for professional advancement in human resources. Competencies required by human resources professionals are best defined by content of the *SHRM* examination, and they are the same competencies covered in the coursework required for the certificate. The certificate in no way implies or guarantees that the student will pass the exam but should be seen as an important professional accomplishment.

### Required Courses

The following courses provide the student with knowledge in all of the tested areas:

- PSYC-381 Industrial/Organizational Psychology
- PSYC-382 Human Resource Management
- PSYC-403 Management of Employee Reward Systems
- PSYC-485 Recruitment & Selection of Human Resources
- TRHRD-360 Training Systems in Business and Industry
- ECON-421 Collective Bargaining & Labor Relations
- RC-381 Principles of Occupational Risk Control/Safety

## Quality Management Certificate

The certificate program is designed to provide technical and professional responsibility at the Sigma Six Green Belt level to those in industry. Students in this program are prepared for the American Society for Quality (ASQ) Six Sigma certification through examinations upon completion of a project through their organizations.

### Required Courses

- INMGT-320 Quality Tools
- INMGT-325 Quality Management
- INMGT-410 Six Sigma Quality Improvement Methods

## Social Work Certificate

### Introduction

Students who complete the Social Work Professional Certificate will be able to:

1. Demonstrate their understanding of an effective, ethical, and culturally competent social work practice that emphasizes the strengths of people, families, groups, and communities.
2. Demonstrate their gained knowledge of the social work field which emphasizes applied research and scholarship while positively impacting social work practice and policy, locally to internationally.
3. Demonstrate their comprehension of theory-driven, evidence-based, and cultural-enriched knowledge that supports and advocates for socially and economically vulnerable and oppressed individuals, families, and communities in a respectful manner while fostering human diversity and social justice perspectives.

### Required Courses

- SOCWK-205 Introduction to Social Work
- SOCWK-397 Field Experience in Social Work
- SOCWK-420 Human Behavior and Social Environment
- SOCWK-430 Social Casework Methods
- SOCWK-440 Social Work Practice with Groups and Families
- SOCWK-450 Macro Social Work Practice

## Supply Chain Management Certificate

The Supply Chain Management certificate provides students with expertise to assume, concurrently with other technical and professional responsibilities, the management of components within their supply chain. Course work coincides with American Production and Inventory Control Society objectives for its certification examination.

### Required Courses

- INMGT-305 Resource Planning and Materials Management
- INMGT-405 Resource Planning and Materials Management Practicum
- INMGT-320 Quality Tools
- INMGT-325 Quality Management
- BUSCM-338 Principles of Logistics

## Selectives

*Select at least 5 credits from the list of courses supplied by the department.*

## Sustainable Enterprise Management Certificate

The Sustainable Enterprise Management professional development certificate focuses on the relevant and applicable knowledge needed to assist organizations to be profitable while contributing to environmental sustainability and social responsibility.

The certificate is designed to provide a professional learning experience for individuals interested in expanding their expertise in sustainable business.

## Required Courses

The 15 credit certificate includes the following courses:

- SMGT-230 Triple Bottom Line Accounting for Managers
- SMGT-235 Economics in Society and Sustainability
- SMGT-331 Sustainable Organizational Finance
- SMGT-335 Management and Environmental Information Systems *or*
- SMGT-350 Operations Management and Sustainability
- SMGT-430 International Management for a Sustainable World

## Sustainable Management Science Certificate

The Sustainable Management Science Certificate focuses on improving sustainability in the workplace and strengthening the larger community through increased environmental awareness, productivity, and efficiencies.

The certificate is designed to provide a professional learning experience for individuals interested in expanding their expertise in areas such as energy, waste management and natural resource management.

## Required Courses:

The 12 credit certificate includes the following courses:

- SMGT-310 Ecology for Sustainable Management
- SMGT-315 Global Environmental Chemistry
- SMGT-320 Energy for Sustainable Management

- SMGT-325 Natural Resource Management

## **Web Technology Certificate**

The certificate provides participants with the knowledge needed to have a broad understanding of how to plan, develop, implement and evaluate standards based websites and strategies for their success. Professionals develop relevant understanding and use of information and communication technologies to increase the probability that the targeted end users are able to find and access the information or services they are seeking, and organizations are able to track the use and performance of their content through actionable data.

### **Required Courses:**

- ICT-311 Information and Communication Technologies Analytics
- ICT-375 Web Production and Distribution
- ICT-475 Dynamic Web Technologies
- ICT-485 Search Engine Optimization

## **Women and Gender Studies Certificate**

This certificate introduces students to concepts crucial to the study and application of knowledge in the field of women and gender studies as they enter a highly competitive job market. Certificate recipients will be able to apply and articulate interdisciplinary knowledge specific to women and gender studies such as social construction of gender in relation to such factors as race, ethnicity, class, sexuality, disability, and age.

### **Required Courses**

- WGS-210 Introduction to Women and Gender Studies
- HIST-321 United States Women's History
- SOC-275 Sociology of Gender Roles
- ANTH-356 Gender in Cross Cultural Perspective

## **Workplace Diversity Certificate**

The Workplace Diversity certificate is designed to assist managers and HR professionals in dealing with an ever more diverse workforce. This program is designed to show managers how to capitalize on this diverse workforce and improve long term organizational success by bringing fresh ideas and new perspectives to the world of work.

Our approach is focused upon how individuals and groups can use their differences to become more creative and resilient. Courses focus on issues like changing Human Resource Practices and organizational change methods that will bring effective change and a sense of inclusion to the organization. The program also includes courses about unique features of specific minority groups, their culture and histories, to sensitize the student to cultural differences. Specifically, the program focuses on differences in: race and ethnicity, gender identity, age, disability, religion and sexual orientation.

### **Required Courses:**

## 1. Foundation

- PSYC-XXX Foundations of Workplace Diversity (3.00 cr.)
- SPCOM-312 Intercultural Communication

Choose one course from Area 2 and one course from Area 3.

## 2. Ethnicity/Race

- PSYC-340 Psychology of Individual and Group Differences
- HIST-322 African-American History
- HDFS-275 Race Matters: Interdisciplinary Investigations
- EDUC-336 Multiculturalism: Issues & Perspectives

## 3. Gender

- INMGT-415 Inclusivity in Leadership
- SOC-275 Sociology of Gender Roles
- HIST-321 United States Women's History
- HDFS-350 Women's Relationships in Later Life \*\*
- WGS-210 Introduction to Women and Gender Studies

Choose a course from two of the following areas (4-7):

## 4. Age

- HDFS-340 Human Development: Late Adulthood
- HDFS-350 Women's Relationships in Later Life \*\*
- REHAB-355 Rehabilitation of the Older Disabled Worker

## 5. Disability

- REHAB-230 Psychosocial Aspects of Disability
- HT-360 Tourism for Persons with Disabilities

## 6. Religion

- XXX-XXX Religious Issues in the Workplace (3.00 cr.)

## 7. Sexual Orientation (LGBTQ)

- HDFS-352 Sexual and Gender Identities in Families and Society

## 8. Capstone (required)

- PSYC-XXX Applied Diversity Organizational Strategies (3.00 cr.)

Note(s):

*\*\* HDFS 350 may only be taken to count toward one area.*

## Other Programs

# University Requirements: General Education, Racial and Ethnic Studies, and Global Perspective

## University Requirements

UW-Stout prepares students to graduate with broad, important understandings of daily life in a global society. Thus, there are three university requirements to be fulfilled prior to graduation:

### 1. General education (GE, divided into categories and areas)

Within the general education requirement, a single course cannot be used by students to fulfill multiple categories; however, a single course might be eligible for more than one category. For example, CHEM-110 is approved as both Natural Science and Contemporary Issues, but CHEM-110 will meet just one category in the student's program.

### 2. Racial and ethnic studies (RES)

### 3. Global perspectives (GLP)

**Note:** Some courses fulfill requirements in all three areas. An example of a single course that fulfills GE, RES, and GLP requirements is ANTH-320. Students who select courses that count for more than one requirement (GE, RES and GLP) reduce the total number of courses they take to fulfill the above university requirements.

## General Education Requirements

The General Education Program provides the core of what it means to be a well-educated university graduate. The goal is to promote human excellence through a broad foundation of skills and knowledge required to realize a meaningful personal, professional, and civic life. The General Education Program is intended to enable students to contribute to and live responsibly in a diverse, interconnected, and technologically sophisticated global community.

In accordance with the general education program, general education courses should be accessible to a broad audience and should further the goal of providing a well-rounded education regardless of career aspirations or program of study.

Each degree program has a general education component designed to provide you with knowledge and skills in communication, analytic reasoning, natural sciences, arts, humanities, social and behavioral sciences, contemporary issues, social responsibility and ethical reasoning. Listed below are the general education requirements and courses that will fulfill these requirements. General education courses are listed by category and area. Not all courses are offered each semester. Changes to the course list can occur at any time. Some degree programs have specific general education courses that must be taken in order to satisfy certification, accreditation or prerequisite standards. These exceptions are noted on your program plan sheet.

## General Education Credit Distribution (40 credits)

### Communication Skills (9 credits)

- ENGL-101 Composition 1 or
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2 or
- ENGL-112 Freshman English--Honors II or
- ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

### Analytical Reasoning and Natural Sciences (10 credits)

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

### Arts and Humanities (6 credits)

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.

### Social and Behavioral Sciences (6 credits)

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

### Contemporary Issues (3 credits)

Courses must be selected from the list of approved contemporary issues courses, which includes technology.

### Social Responsibility and Ethical Reasoning (3 credits)

Courses must be selected from the list of approved social responsibility and ethical reasoning courses, which includes health, health education, and athletics.

### Selectives (3 credits)

Courses/credits may be selected from any category to meet the 40-credit requirement.

## Communication Skills (9 credits)

Communication Skills are the study and application of expressive and receptive language skills, most often exercised in reading, writing, speaking, and listening. These fundamental skills are basic to human development and academic functioning.

- ENGL-101 Composition 1
- ENGL-111 Freshman English--Honors I
- ENGL-102 Composition 2
- ENGL-112 Freshman English--Honors II
- ENGL-113 Honors Seminar I
- ENGL-247 Critical Writing
- FREN-101 Elementary French I
- FREN-102 Elementary French II
- FREN-122 Practical French II
- FREN-123 Practical French III
- FREN-124 Practical French IV
- FREN-202 Intermediate French II
- CHIN-101 Elementary Chinese I
- CHIN-102 Elementary Chinese II
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II
- SPAN-122 Practical Spanish II
- SPAN-202 Intermediate Spanish II
- SPAN-227 Spanish Composition and Conversation I
- SPCOM-100 Fundamentals of Speech
- SPCOM-200 Persuasive Speaking
- SPCOM-206 Discussion
- SPCOM-208 Theory of Communication
- SPCOM-210 Interpersonal Speech Communication
- SPCOM-236 Listening

## Analytical Reasoning and Natural Sciences (10 credits)

### Analytic Reasoning

Analytic reasoning is the formulation and critique of deductive and inductive arguments, both quantitative and non-quantitative. This reasoning is essential to many intellectual activities, such as critical thinking, problem-solving, creating and applying. This component requires students to engage in general learning experiences in mathematics, logic, statistics, or computer science.

- CS-141 Introduction to Programming
- CS-144 Computer Science I
- LOG-301 Introduction to Logical Thinking
- MATH-118 Concepts of Mathematics
- MATH-120 Introductory College Mathematics I



- MATH-121 Introductory College Mathematics II
- MATH-123 Finite Mathematics with Applications
- MATH-150 Calculus with Precalculus A
- MATH-151 Calculus with Precalculus B
- MATH-153 Calculus I
- MATH-154 Calculus II
- MATH-156 Calculus and Analytic Geometry I
- MATH-157 Calculus and Analytic Geometry II
- STAT-130 Elementary Statistics
- STAT-320 Statistical Methods

## Natural Sciences

The Natural Sciences are the sciences of the physical world, its phenomena, and the laws governing these phenomena. The branches of Natural Sciences--such as astronomy, geosciences, biological sciences, chemistry, physics--deal primarily with matter, energy, and their interrelations and transformations; with living organisms and vital processes; with the laws and phenomena relating to organisms, plants and animal life; with the physical processes and phenomena of particular systems; and with the physical properties and composition of nature and its products.

## Life Sciences

- BIO-101 Introductory Biology
- BIO-111 Science, the Environment and Sustainability
- BIO-125 Biology of Aging
- BIO-130 Human Sexual Biology
- BIO-132 Human Biology
- BIO-141 Plants and People
- BIO-150 Environmental Science
- BIO-210 Concepts and Issues in Biotechnology
- BIO-234 Physiology and Anatomy
- BIO-242 Botany
- BIO-252 Zoology
- BIO-260 Ichthyology - Wisconsin Fishes
- BIO-270 Natural History of the Neotropics
- BIO-332 Genetics
- CNS-200 Introduction to Cognitive Neuroscience
- CNS-201 Introduction to Cognitive Neuroscience Lab
- FN-123 Science of Food

## Physical Sciences

- CHEM-105 Visualizing Chemistry
- CHEM-110 Chemistry in Our World
- CHEM-115 General Chemistry
- CHEM-125 Principles of Chemistry for Health Sciences
- CHEM-135 College Chemistry I

- CHEM-136 College Chemistry II
- NANO-101 Exploration of Nanotechnology
- PHYS-150 The Nature and Application of Light and Color
- PHYS-151 Astronomy
- PHYS-211 Introduction to Physics
- PHYS-212 Introduction to Physics: Lab
- PHYS-242 College Physics II
- PHYS-250 The Physics of Light and Color
- PHYS-251 Topics in Astronomy
- PHYS-255 Meteorology
- PHYS-258 Introduction to Geology
- PHYS-281 University Physics I
- PHYS-282 University Physics II
- PHYS-301 Physics for Future Presidents

## Arts and Humanities (6 credits)

### Arts

Arts employ conscious use of skill and creative imagination in the production of artistic objects or performances which stress values that stand outside of conventional ideas of utility.

### Humanities

The Humanities investigate human constructs and values, as opposed to those studies that investigate natural and physical processes and those that are concerned with the development of basic or professional skills. The humanistic disciplines--such as art history, history, music appreciation, literature, and philosophy--are concerned with questions, issues and concepts basic to the formation of character and the establishment of values in a human context; they induce an organic study of letters and knowledge; they provide literary, aesthetic and intellectual experiences which enrich and enlighten human life.

## Art History/Music and Theater Appreciation

- ARTH-222 Introduction to Art
- ARTH-223 Survey of Art--Ancient Through Medieval
- ARTH-224 Survey of Art-Renaissance Through 20th Century
- ARTH-225 Introduction to Non-Western Art
- ARTH-250 British Art, Architecture, and Design
- ARTH-331 Art and Controversy
- MUSIC-120 Music Fundamentals
- MUSIC-130 Music Appreciation
- MUSIC-132 Music in Our World
- MUSIC-134 Rock Music History
- MUSIC-236 Music in Media
- MUSIC-300 Special Topics in Music
- MUSIC-320 Music Theory
- MUSIC-330 Survey of Western Music History

- THEA-232 Introduction to the Theater
- THEA-334 Contemporary Theater

## Creative/Performing Arts

- ART-100 Drawing I
- ART-101 Two-Dimensional Design Foundations
- ART-213 Ceramics I
- ART-215 Art Metals I
- ENGL-245 Creative Writing
- MUSIC-101 Class Piano I
- MUSIC-201 Class Piano II
- MUSIC-231 Honors Jazz History
- MUSIC-264 Jazz Band
- MUSIC-266 Concert Band
- MUSIC-267 Symphonic Singers
- MUSIC-269 Chamber Choir
- MUSIC-270 Vocal Jazz Ensemble
- PHOTO-130 Introduction to Still and Moving Image Photography
- PHOTO-204 Exploring Photography
- THEA-131 Theater Practicum
- THEA-200 Stagecraft
- THEA-332 The Directing and Acting Process

## Foreign Language & Culture

- FREN-201 Intermediate French I
- SPAN-201 Intermediate Spanish I
- SPAN-229 Hispanic Literature in America
- SPAN-304 Latin American Short Story

## History

- HIST-120 Early United States History
- HIST-121 Modern United States History
- HIST-140 Western Civilization
- HIST-141 Western Civilization
- HIST-210 Modern World
- HIST-311 Women and War: A Global Perspective in the Modern Era
- HIST-321 United States Women's History
- HIST-322 African-American History
- HIST-323 American Immigration and Ethnic History
- HIST-330 History of World War II
- HIST-335 World War II: An Ethnic and Global History

- HIST-350 History of the Vietnam War
- HIST-360 Asian History
- HIST-380 Latin American History
- HIST-391 History of Social Science and Race
- HIST-347 Introduction To British Civilization

## Literature

- LIT-203 American Poets
- LIT-205 The Short Story
- LIT-208 Fiction Into Film
- LIT-230 American Cinema
- LIT-255 Recent World Literature
- LIT-260 Modern American Literature
- LIT-265 Literature and Economics
- LIT-272 Women Writers
- LIT-273 American Multicultural Literature
- LIT-275 Environmental Literature
- LIT-280 Best-Sellers
- LIT-281 Recent American Literature: Culture, Race, Ethnicity and Nature
- LIT-285 Science Fiction
- LIT-300 Children's Literature
- LIT-301 English Literature
- LIT-302 Topics in Literature
- LIT-303 Coming of Age in Literature and Film
- LIT-304 American Folklore
- LIT-306 Shakespeare
- LIT-350 Modern British Literature
- LIT-450 Studies in Literature (Theme, Author, Genre)

## Philosophy

- PHIL-201 Introduction to Philosophy
- PHIL-205 Philosophy of Religion
- PHIL-215 Eastern Philosophy
- PHIL-220 Multicultural Philosophy
- PHIL-225 Belief, Knowledge and Truth
- PHIL-235 General Ethics
- PHIL-275 Business Ethics

## Social and Behavioral Sciences (6 credits)

### Social Sciences

The social sciences formulate and verify general hypotheses regarding human behavior. The social sciences deal with the behavior of societal, economic, political and cultural groups. Consequently this component focuses on the academic disciplines of sociology, economics, political science and cultural anthropology, insofar as these disciplines deal with general and non-applied knowledge concerning social behavior.

### **Behavioral Sciences**

The behavioral sciences include general knowledge about the psychological behavior of human beings, insofar as this knowledge concerns the human being's relationships to the self and to other individuals. Criteria focus on the general and applied learning experiences in the field of psychology.

## **Anthropology**

- ANTH-220 Cultural Anthropology
- ANTH-230 Anthropology of the Contemporary United States
- ANTH-250 The Human Past
- ANTH-300 Native Americans

## **Economics**

- ECON-201 General Economics
- ECON-210 Principles of Economics I
- ECON-215 Principles of Economics II

## **Geography**

- GEOG-104 World Geography
- GEOG-310 Geography of Food

## **Political Science**

- POLS-210 American Government
- POLS-270 Introduction to Comparative Government
- POLS-340 International Relations

## **Psychology**

- CNS-200 Introduction to Cognitive Neuroscience
- HDFS-195 Honors Seminar: Lifespan Human Development
- HDFS-255 Lifespan Human Development
- PSYC-110 General Psychology
- PSYC-225 Psychology of Video Games

## Sociology

- SOC-110 Introductory Sociology
- SOC-225 Social Problems
- SOC-400 Sociology of Altruism

## Contemporary Issues (3 credits)

Contemporary Issues courses engage students in interdisciplinary learning experiences focused on significant issues of current concern. These courses immerse students in the analysis of significant and current issues that require two or more disciplinary perspectives to synthesize solutions. Contemporary Issues courses aim at understanding the interdisciplinary nature of knowledge and the application of an interdisciplinary approach needed to solve many complex contemporary problems.

- AEC-191 The Built Environment
- ANTH-290 Global Political Ecology
- ANTH-310 Latinos in the United States
- ANTH-320 Social Movements in Global Perspective
- BIO-111 Science, the Environment and Sustainability
- BIO-130 Human Sexual Biology
- BIO-141 Plants and People
- CHEM-110 Chemistry in Our World
- DES-150 Introduction to Sustainable Design and Development
- ECON-360 Strategic Decision Making and Game Theory
- EDUC-210 Impacts of Technology on Learning
- EDUC-260 Images of Education: Not Another Brick in the Wall
- EDUC-320 Racism and Colonialism: Impact on Communities and Education
- EDUC-330 Multiculturalism: Dialogue and Field Experience
- ENGN-100 Impacts of Engineering
- FN-244 Farm to Fork: Food Issues
- GEOG-290 Global Political Ecology
- GEOG-310 Geography of Food
- HDFS-352 Sexual and Gender Identities in Families and Society
- HDFS-410 Families in an Electronic World
- HDFS-460 Religious Diversity and the Workplace
- HIST-230 Sexualities in Historical and Social Perspective
- HIST-240 History and Politics of Africa
- HIST-324 United States Labor History
- ICT-103 Information and Communication Technologies
- LIT-205 The Short Story
- LIT-230 American Cinema
- LIT-265 Literature and Economics
- LIT-307 After 9/11: American Literature of Public Crisis and Trauma
- LIT-308 Alice Walker: Beyond Purple
- MUSIC-231 Honors Jazz History
- PAX-201 Introduction to Applied Peace Studies
- PAX-210 Nonviolence and the Civil Rights Movement

- PE-205 Lifelong Wellness: Biggest Loser Style
- PHYS-301 Physics for Future Presidents
- POLS-240 History and Politics of Africa
- POLS-250 History of Race, Politics and Technology
- PSYC-281 Psychology for Sustainability
- SOC-230 Sexualities in Historical and Social Perspective
- SOC-250 Social Psychology
- SOC-290 Global Political Ecology
- SOC-291 Sociology of Health and Illness
- SOC-320 Social Movements in Global Perspective
- SOC-325 Sociology of Leisure
- SOC-385 Globalization and Social Change
- SPCOM-312 Intercultural Communication
- TRDIS-210 Technology, Fab Lab, and Society
- WGS-210 Introduction to Women and Gender Studies
- ECON-310 Economics of Conflict

## Social Responsibility and Ethical Reasoning (3 credits)

Social Responsibility and Ethical Reasoning courses engage students in identifying, analyzing, and evaluating issues involving social responsibility and/or ethical decision making. This can be done in the context of a variety of disciplines (e.g., ethics and government, literature, science and society, wellness) and a variety of pedagogical methods (e.g., case studies, small group discussions, service learning, lectures, reading assignments, and activity courses).

- AEC-191 The Built Environment
- ANTH-230 Anthropology of the Contemporary United States
- ANTH-290 Global Political Ecology
- ANTH-293 Environmental Justice
- ANTH-320 Social Movements in Global Perspective
- ANTH-356 Gender in Cross Cultural Perspective
- ARTH-331 Art and Controversy
- BUMGT-235 Management Ethics
- DES-150 Introduction to Sustainable Design and Development
- ECON-360 Strategic Decision Making and Game Theory
- EDUC-320 Racism and Colonialism: Impact on Communities and Education
- EDUC-330 Multiculturalism: Dialogue and Field Experience
- ENGL-245 Creative Writing
- ENGN-100 Impacts of Engineering
- FN-210 Issues and Ethics in Food and Nutrition
- GEOG-290 Global Political Ecology
- HDFS-257 Lifespan Sexuality
- HIST-221 Wisconsin State History
- HIST-323 American Immigration and Ethnic History
- HIST-324 United States Labor History
- HIST-325 History of American Indians
- HIST-340 Mixed-Heritage History of the Americas
- HIST-377 History of Ideas in the Twentieth Century

- HIST-390 Modern History of Science and Technology
- HIST-392 History of Mad Science
- HWF-340 Community CPR, Automatic External Defibrillation and First Aid
- ICT-215 Cybertechnology Ethics
- LIT-275 Environmental Literature
- LIT-307 After 9/11: American Literature of Public Crisis and Trauma
- PAX-201 Introduction to Applied Peace Studies
- PE-201 Wellness and Social Responsibility
- PE-202 Lifelong Fitness 2: League Sports
- PE-203 Team Sports
- PE-204 Competition in the 21st Century
- PE-205 Lifelong Wellness: Biggest Loser Style
- PHIL-201 Introduction to Philosophy
- PHIL-235 General Ethics
- PHIL-275 Business Ethics
- PHYS-301 Physics for Future Presidents
- PSYC-280 Forensic Psychology, Law and Ethics
- PSYC-281 Psychology for Sustainability
- PSYC-350 Culture and Psychology
- SOC-290 Global Political Ecology
- SOC-291 Sociology of Health and Illness
- SOC-293 Environmental Justice
- SOC-320 Social Movements in Global Perspective
- SOC-325 Sociology of Leisure
- SOC-385 Globalization and Social Change
- SPCOM-312 Intercultural Communication
- TRDIS-220 Insights into Innovation and Ideation
- WGS-356 Gender in Cross Cultural Perspective

## Racial and Ethnic Studies Requirement (6 credits)

Beginning Fall 2013, the Racial and Ethnic Studies requirement will be six credits, with a minimum of three credits from the Category RES-A course list.

### RES-A

- ANTH-230 Anthropology of the Contemporary United States
- ANTH-293 Environmental Justice
- ANTH-300 Native Americans
- ANTH-310 Latinos in the United States
- EDUC-320 Racism and Colonialism: Impact on Communities and Education
- EDUC-330 Multiculturalism: Dialogue and Field Experience
- EDUC-336 Multiculturalism: Issues & Perspectives
- GEOG-310 Geography of Food
- HDFS-275 Race Matters: Interdisciplinary Investigations
- HDFS-335 Critical Cultural Competence



- HIST-322 African-American History
- HIST-323 American Immigration and Ethnic History
- HIST-325 History of American Indians
- HIST-340 Mixed-Heritage History of the Americas
- HIST-391 History of Social Science and Race
- LIT-273 American Multicultural Literature
- LIT-307 After 9/11: American Literature of Public Crisis and Trauma
- LIT-308 Alice Walker: Beyond Purple
- MUSIC-231 Honors Jazz History
- PHIL-220 Multicultural Philosophy
- POLS-250 History of Race, Politics and Technology
- SOC-291 Sociology of Health and Illness
- SOC-293 Environmental Justice
- SOC-375 Sociology of Minority Groups
- SPCOM-312 Intercultural Communication
- WGS-210 Introduction to Women and Gender Studies

## RES-B

- ANTH-220 Cultural Anthropology
- ANTH-320 Social Movements in Global Perspective
- HIST-120 Early United States History
- HIST-121 Modern United States History
- HIST-221 Wisconsin State History
- HIST-230 Sexualities in Historical and Social Perspective
- HIST-324 United States Labor History
- HIST-335 World War II: An Ethnic and Global History
- HT-350 Hospitality Diversity Management
- INMGT-415 Inclusivity in Leadership
- LIT-203 American Poets
- LIT-208 Fiction Into Film
- LIT-230 American Cinema
- LIT-260 Modern American Literature
- LIT-272 Women Writers
- LIT-281 Recent American Literature: Culture, Race, Ethnicity and Nature
- LIT-303 Coming of Age in Literature and Film
- MUSIC-134 Rock Music History
- POLS-210 American Government
- PSYC-350 Culture and Psychology
- SOC-225 Social Problems
- SOC-230 Sexualities in Historical and Social Perspective
- SOC-320 Social Movements in Global Perspective
- SPAN-229 Hispanic Literature in America

## Global Perspective Requirements (6 credits)

Both the globalization of work and the career education that is part of UW-Stout's mission make it desirable that students appreciate cultural, economic, political, environmental and social differences. Learning a second language at the college level and developing an understanding of another culture provides students with skills they will use in international situations. To earn a bachelor's degree, students who started Fall 2010 or later must fulfill a global perspective requirement by:

- Completing a program of university-approved work or study abroad, or
- Completing six credits of courses approved as fulfilling the global perspective requirement.

The following Global Perspective (GLP) courses count toward the six-credit requirement:

- ANTH-220 Cultural Anthropology
- ANTH-290 Global Political Ecology
- ANTH-320 Social Movements in Global Perspective
- ANTH-356 Gender in Cross Cultural Perspective
- APRL-134 Global Fashion Industry
- APRL-274 Fashion Industry
- ARTH-225 Introduction to Non-Western Art
- ARTH-250 British Art, Architecture, and Design
- ARTH-333 History of Interiors and Furnishings
- ARTH-339 Japanese Art and Culture
- BIO-111 Science, the Environment and Sustainability
- BIO-141 Plants and People
- BIO-150 Environmental Science
- BIO-210 Concepts and Issues in Biotechnology
- BIO-270 Natural History of the Neotropics
- BUINB-260 International Business
- BUINB-367 International Management
- BUINB-485 International Marketing
- BUINB-489 International Business Policies
- BURTL-319 International Economic Trends in Textiles and Clothing
- BURTL-417 Social/Psychological Aspects of Clothing
- CMG-495 Cross-Media Seminar
- CSTEM-125 Gender and Science, Technology, Engineering and Mathematics
- DES-150 Introduction to Sustainable Design and Development
- ECON-201 General Economics
- ECON-210 Principles of Economics I
- ECON-215 Principles of Economics II
- ECON-425 Economic Development
- ECON-480 International Economics
- EDUC-320 Racism and Colonialism: Impact on Communities and Education
- EDUC-330 Multiculturalism: Dialogue and Field Experience
- EDUC-336 Multiculturalism: Issues & Perspectives
- EDUC-401 Global Education Practicum
- EDUC-402 Global Perspectives for Educators
- ENGN-100 Impacts of Engineering
- FN-123 Science of Food
- FN-222 Food Technology
- FREN-101 Elementary French I
- FREN-102 Elementary French II
- FREN-121 Practical French I

- FREN-122 Practical French II
- FREN-124 Practical French IV
- FREN-201 Intermediate French I
- FREN-202 Intermediate French II
- FREN-299 Independent Study
- FREN-499 Independent Study
- GEOG-104 World Geography
- GEOG-251 Introduction to Geographic Information Systems
- GEOG-290 Global Political Ecology
- HIST-121 Modern United States History
- HIST-210 Modern World
- HIST-240 History and Politics of Africa
- HIST-311 Women and War: A Global Perspective in the Modern Era
- HIST-323 American Immigration and Ethnic History
- HIST-330 History of World War II
- HIST-335 World War II: An Ethnic and Global History
- HT-100 Introduction to Hospitality
- HT-140 Principles of Tourism
- HT-240 Tourism Goods and Services
- HT-326 Introduction to Wines and Spirits
- HT-423 Wine and Food Pairing
- ICT-103 Information and Communication Technologies
- ICT-215 Cybertechnology Ethics
- ICT-401 Information Technology Policy And Audit
- INMGT-335 Lean Manufacturing Systems
- INMGT-462 Global Manufacturing Study Tour
- LIT-255 Recent World Literature
- LIT-272 Women Writers
- LIT-350 Modern British Literature
- MUSIC-132 Music in Our World
- PHIL-201 Introduction to Philosophy
- PHIL-215 Eastern Philosophy
- PKG-100 Packaging and Society
- POLS-240 History and Politics of Africa
- POLS-270 Introduction to Comparative Government
- POLS-340 International Relations
- PSYC-382 Human Resource Management
- SMGT-430 International Management for a Sustainable World
- SOC-110 Introductory Sociology
- SOC-225 Social Problems
- SOC-290 Global Political Ecology
- SOC-291 Sociology of Health and Illness
- SOC-320 Social Movements in Global Perspective
- SOC-375 Sociology of Minority Groups
- SOC-385 Globalization and Social Change
- SPAN-103 Elementary Spanish I
- SPAN-104 Elementary Spanish II

- SPAN-121 Practical Spanish I
- SPAN-122 Practical Spanish II
- SPAN-201 Intermediate Spanish I
- SPAN-202 Intermediate Spanish II
- SPAN-227 Spanish Composition and Conversation I
- SPAN-229 Hispanic Literature in America
- SPAN-299 Independent Study
- SPAN-304 Latin American Short Story
- SPAN-318 Cinema for Spanish Proficiency
- SPAN-399 Independent Study
- SPAN-499 Independent Study
- SPCOM-312 Intercultural Communication
- SRVM-111 Introduction to Global Service Management-HT
- SRVM-420 International Service Concepts
- SUST-432 Global Sustainability Experience in Design & Manufacturing
- TRDIS-350 Applied Foreign Language Project
- WGS-210 Introduction to Women and Gender Studies
- WGS-356 Gender in Cross Cultural Perspective
- FREN-123 Practical French III

## Note

With careful planning, you may take a single course that fits into areas of general education, racial and ethnic studies, and/or global perspective. While credits count once toward graduation, they may be used to satisfy multiple requirements. When a course meets multiple requirements, codes indicating other categories are listed in parentheses next to the course listing.

Students planning to study abroad should refer to application materials and consult with advisor to see how courses taken abroad satisfy GE and RES requirements.

Exceptions, substitutions, and/or waivers regarding General Education, Racial and Ethnic Studies, or Global Perspective requirements must be approved by the Associate Vice Chancellor.

## Course Descriptions

### Undergraduate Bulletin Course Description Introduction

Course descriptions are listed (in this section) in alphabetical order by curricular subject abbreviations. Undergraduate courses are those numbered from 100 through 499. All numbers above that are for graduate credit.

### General Education, Racial and Ethnic Studies and Global Perspective Requirements

This section describes the purpose of and outlines the requirements of each of these course categories.

Each degree program has a general education component designed to provide you with knowledge and skills in communication, analytic reasoning, natural sciences, arts, humanities, social and behavioral sciences, contemporary issues, social responsibility and ethical reasoning. The university also requires students to take courses to learn about the diverse cultures that make up the United States. With careful planning, some of the general education courses and racial and ethnic studies courses may overlap.

That is, you may take a course that meets both general education and racial and ethnic studies requirements. While the credits you earn count once toward graduation, they may be used to satisfy requirements in these two areas. The global perspective requirement for undergraduates stems from the goals of UW-Stout's distinctive mission and array of programs that combine theory, practice and experimentation.

#### General Education Credit Distribution

### **Racial and Ethnic Studies Requirements**

The Racial and Ethnic Studies requirement is six credits with a minimum of three credits from RES-A. Each student must satisfy the racial and ethnic studies requirement as preparation for being an engaged citizen in a highly diverse society. Racial and ethnic studies courses prepare students for being engaged citizens in a highly diverse society and to come to appreciate, understand, value and respond respectfully to cultural diversity. Through the study of U.S. cultures other than those from a European origin, we hope to discourage racism and thus reduce its effects. An important emphasis is critical reflection and application of acquired learning to professional and personal contexts. Lists of the racial and ethnic studies courses in each category are available online. Transfer students who have fulfilled the racial and ethnic studies requirement at another UW System university are exempt from meeting UW-Stout's criteria.

### **Global Perspective Requirement**

Both the globalization of work and the career education that is part of UW-Stout's mission make it desirable that students appreciate cultural, economic, political, environmental and social differences. Learning a second language at the college level and developing an understanding of another culture provides students with skills they will use in international situations. To earn a bachelor's degree, students who started Fall 2010 or later must fulfill a global perspective requirement by:

- Completing a program of university-approved work or study abroad, or
- Completing six credits of courses approved as fulfilling the global perspective requirement.

### **Interpreting Course Descriptions**

This document will help you understand the various codes used in the course descriptions that follow.

A typical course description in the Undergraduate Bulletin appears like this:

LIT 273 American Multicultural Literature

The three digits of the course codes refer to the course level. The 100 series is primarily for freshmen; 200 – sophomores; 300 – juniors; and 400 – seniors.

### **Credits**

UW-Stout defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates: [1] At least one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time; or [2] At least an equivalent amount of work as required in part one [1] of this definition for other academic activities as established by UW-Stout, including distance education, online, hybrid, or other indirect faculty instruction, laboratory work, internships, co-op experiences, studio work, and other academic work leading to the award of credit hours.

### **Course Planning Information**

Information included with the course description helps you as you plan your course schedules. General Education, Racial and Ethnic Studies, Global Perspective, repeatability, and terms offered (if known) are indicated.

The terms indicated serve only as a general guide and do not guarantee that a course will be offered during a particular semester. Verify availability of a course in any given term by checking the online Open Courses listing or through Access Stout when planning your schedule.

## **Architecture, Engineering and Construction**

### **AEC-120 Construction Industry Orientation and Documents**

3 cr.

Repeatable for Credit: No

An introduction to the field of construction to broaden student understanding and develop appreciation of the entire scope of construction. Emphasis on fundamental understanding of construction documents including drawings and specifications.

Relationship between drawings and specifications to other contractual documents will be explored.

### **AEC-131 Architectural Graphics**

3 cr.

Repeatable for Credit: No

Architectural drafting with emphasis on drawing theory and delineation. Drawing media and equipment are utilized in solving problems relating to construction that are normally solved graphically. If taken for three credits, computer aided drafting will be included in the course work.

### **AEC-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **AEC-171 Light Construction Methods and Materials**

3 cr.

Repeatable for Credit: No

The building process, terminology, codes, materials, safety requirements, tools, and equipment used in the construction industry with emphasis on residential and small commercial structures.

### **AEC-172 Construction Technology**

3 cr.

Repeatable for Credit: No

Technology of constructing buildings, bridges and other structures, including: site preparation, foundation systems, superstructures, enclosures, utilities, finishing methods, and materials.

### **AEC-190 Orientation to Construction Industry**

1 cr.

Repeatable for Credit: No

An introduction to the field of construction as presented by professionals in the construction industry to broaden student understanding and develop appreciation of the entire scope of construction.

### **AEC-191 The Built Environment**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Construction and its relationship to resources, materials, and the culture in which it takes place. Discussion of significant historical and modern structures. Emphasis on how, why, and by whom structures are built and what can be learned from them.

### **AEC-198 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **AEC-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **AEC-233 Architectural Design I**

3 cr.

Repeatable for Credit: No

Develop graphic simulation techniques and problem- solving abilities related to the architectural effectuation process. Gain an understanding of site planning, residential space requirements, building codes, structure, finishes, mechanical and electrical systems.

*Prerequisites: take AEC-131*

### **AEC-237 Architectural Technology**

3 cr.

Repeatable for Credit: No

Space programming and planning, working drawings for commercial and industrial buildings. Building codes, energy requirements, construction contract documents, structural materials and systems, building materials and systems.

*Prerequisites: take AEC-131*

### **AEC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **AEC-270 Heavy Construction Methods and Equipment**

3 cr.

Repeatable for Credit: No

Introduction to commercial and industrial building systems: equipment, site preparations, footings, foundations, formwork, concrete, steel, and wood timber techniques.

*Prerequisites: Take AEC-171*

### **AEC-273 Concrete And Masonry Technology**

3 cr.

Repeatable for Credit: No

Fundamental principles of cement and concrete (ingredients, mixing, placement, finishing, curing, properties, and applications); clay and concrete units (ingredients, properties, manufacture, placement, and application).

*Prerequisites: AEC-171 with a grade of C or better*



### **AEC-298 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **AEC-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **AEC-335 Architectural Design II**

3 cr.

Repeatable for Credit: No

Programming and analysis, design solution, presentation and design development drawings for commercial and/or public buildings; scale, site, codes, energy, acoustics, structure and their relation to form.

### **AEC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **AEC-352 Building Mechanical Systems**

3 cr.

Repeatable for Credit: No

Fundamental theory and application of heating, ventilation, air conditioning, plumbing, and fire suppression systems for buildings. Emphasis on system integration and sustainable topics as related to design, construction and management of mechanical construction scope of work.

*Prerequisites: Take AEC-237*

### **AEC-353 Building Electrical and Control Systems**

3 cr.

Repeatable for Credit: No

Fundamental theory and application of the design, layout, and construction of electrical and building control systems. Principles of code, design, construction documents reading, means and methods applied to electrical systems, lighting, building controls, and sustainable topics as related to electrical scope of work.

*Prerequisites: Take AEC-237*

### **AEC-357 Site Engineering**

3 cr.

Repeatable for Credit: No

Use of surveying instruments, techniques, computations and computer technology used to measure and describe land configurations; construction surveying including contours, grades, cut and fill, and drainage.

*Prerequisites: Take AEC-131 & MATH-121 or higher*

### **AEC-370 Construction Estimating I**

3 cr.

Repeatable for Credit: No

Estimating and analyzing material, labor, equipment, methods of construction, overhead and profit, and submitting these factors in the form of a bid.

*Prerequisites: Take AEC-237*

### **AEC-375 Construction Practicum**

2-4 cr.

Repeatable for Credit: No

Technical information, construction problems and actual development of light residential structure.

### **AEC-395 Seminar: Lumber and Wood Products Industry**

3 cr.

Repeatable for Credit: No

Introduction to career opportunities in the lumber and wood products industry and to environmental aspects of forestry, timber harvest, and product manufacture and use. Discussion of topics in forestry, business of lumber, responsible materials, green building and ecosystem markets.

### **AEC-398 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **AEC-399 Independent Study**

1 cr.

Repeatable for Credit: Yes

Department Consent

### **AEC-438 Contract Requirements and Specifications**

3 cr.

Repeatable for Credit: No

Principles of contract requirements and construction specification organization. Development of basic skills of project manual preparation. Demonstration of role of specifications within the construction process and relationship to other construction contract documents.

*Prerequisites: Take ENGL-320 or ENGL-415*

### **AEC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **AEC-455 Advanced Mechanical Construction Systems**

3 cr.

Repeatable for Credit: No

Principles of the design and installation of advanced mechanical systems with an emphasis on industrial construction applications. Related building codes, materials, instrumentation and control systems necessary for the installation and commissioning of advanced mechanical systems.

*Prerequisite: take AEC-352*

### **AEC-456 Advanced Electrical Construction Systems**

3 cr.

Repeatable for Credit: No

Principles of the design and installation of advanced electrical systems in construction. Emphasis on industrial construction applications. Detailed topical coverage of related codes, materials, power generation, instrumentation and control systems necessary for the design, installation and operation of advanced electrical systems.

*Prerequisite: take AEC-353*

### **AEC-458 Structural Systems--Wood and Steel**

3 cr.

Repeatable for Credit: No

Analysis, selection, and delineation of wood and steel structural components and systems in buildings.

*Prerequisites: Take PHYS-321*

### **AEC-459 Structural Systems-Concrete And Masonry**

3 cr.

Repeatable for Credit: No

Analysis, selection, and delineation of concrete and masonry structural components and systems in buildings.

*Prerequisites: Take AEC-458*

### **AEC-460 Sustainable Construction**

3 cr.

Repeatable for Credit: No

Survey of principles of sustainable construction, including building design and delivery methods. Ethics and stewardship as part of the constructor's role in the built environment. Examination of domestic and global Green building assessment systems.

Emphasis is placed on preparing the student for the LEED building assessment system. Must be Junior level or higher

### **AEC-461 Building Codes and Regulations**

3 cr.

Repeatable for Credit: No

Extensive examination of the International Building Code. Intent and purpose of codes and regulations are presented, discussed, and reasoned. Contemporary issues in the construction industry are evaluated by students. Particular emphasis is placed on preparing the student for the ICC Certified Inspector examination. Must be Junior level or higher

### **AEC-470 Construction Estimating II**

3 cr.

Repeatable for Credit: No

Total concept of construction industry costs. Computer-based estimating systems for construction. Contracting, financing, takeoff, pricing, bid preparation, resource and cost studies, control of costs and database operations.

*Prerequisites: Take AEC-370 with a grade of C or better*

### **AEC-471 Project Scheduling and Cost Control**

3 cr.

Repeatable for Credit: No

Total concept of construction industry: contracting, financing, bidding, planning, organizing, coordinating, and controlling functions and techniques.

*Prerequisites: Take AEC-370 with a grade of C or better*

### **AEC-472 Management of Construction**

3 cr.

Repeatable for Credit: No

Organizing, managing and operating the contracting firm.

*Prerequisites: Take BUMGT-304*

### **AEC-473 Mechanical and Electrical Construction Management**

3 cr.

Repeatable for Credit: No

Principles of project management applied to mechanical and electrical construction projects. Organizing, managing and operating a mechanical or electrical specialty contracting firm.

*Prerequisites: take AEC-455 and AEC-456*

### **AEC-495 Seminar**

2 cr.

Repeatable for Credit: No

(Title will reflect specific construction content). Current and projected methods, concepts, technologies and innovations in construction.

### **AEC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Anthropology**

### **ANTH-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ANTH-220 Cultural Anthropology**

3 cr.

**Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Anthropology**

Repeatable for Credit: No

Introduction to anthropological concepts and methods; cultural diversity worldwide and in the United States; aspects of culture and how they change over time; introduction to the application of anthropology to contemporary social issues; anthropological perspectives on race and ethnicity.

### **ANTH-230 Anthropology of the Contemporary United States**

3 cr.

**Racial & Ethnic Studies Category A, Social and Behavioral Science, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Use of theoretical and conceptual principles and perspectives of cultural anthropology to study communities and cultures in the U.S. Examination of race, class, gender, and sexual inequalities; current Native American issues; kinship; religion; militarism; cultures of science and technology.

### **ANTH-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally, entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ANTH-250 The Human Past**

3 cr.

#### **Social and Behavioral Sciences - Anthropology**

Repeatable for Credit: No

Biological anthropology: humans as primates, origins of humans, stages of human evolution, and relationship of biology and culture.

### **ANTH-290 Global Political Ecology**

3 cr.

#### **Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

### **ANTH-293 Environmental Justice**

3 cr.

#### **Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Environmental racism; socio-economic inequality and exposure to environmental hazards; race, class, and environmental suffering; grassroots activism and opposition to environmental inequality and racism, particularly among U.S. minority groups; incorporation of environmental justice principles into public policy and corporate decision-making.

### **ANTH-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ANTH-300 Native Americans**

3 cr.

#### **Racial & Ethnic Studies Category A, Social and Behavioral Sciences - Anthropology**

Repeatable for Credit: No

Survey of Native American cultures; major social, economic, religious, and political forms of organization; contemporary Native American lives and issues in both urban and reservation contexts.

### **ANTH-310 Latinos in the United States**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

People of Latin American origin and Latina/o identities in the United States; cultural construction of identity, especially race, ethnicity, nation, gender, and other differences; contemporary debates related to Latinos, immigration policy, and multiculturalism; conflicts over the meaning of citizenship and national belonging.

### **ANTH-320 Social Movements in Global Perspective**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category B, Global Perspective**

Repeatable for Credit: No

Social movements, collective action and activism; indigenous rights, labor organizing, civil rights, gender- and sexuality-based struggles, racial/ethnic identity formation and the claiming of rights, and antiglobalization activism in the U.S. and internationally; contested meanings of justice, citizenship, and democracy in a context of global capitalism.

### **ANTH-330 Social Theory**

3 cr.

Repeatable for Credit: No

Learning and applying advanced sociological and anthropological theories to social issues. Understanding various tools of explanation in the social sciences, as well as their origins, assumptions, and specific ways-of-knowing. Building a theoretical toolkit with the ability to compare, evaluate and synthesize theories for particular applications.

### **ANTH-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ANTH-356 Gender in Cross Cultural Perspective**



3 cr.

**Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Anthropology, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Gender roles in cross-cultural perspective. Anthropological theories of gender and inequality; social responsibility balancing cultural relativism and equity. Variation in domestic, social, economic, political, and religious roles; historical development of and contemporary changes in gender roles; global influences and processes of change and improvement in the lives of modern women.

**ANTH-400 Applied Anthropology**

3 cr.

Repeatable for Credit: No

Application of anthropology to address social problems through research, advocacy, and policy development. Cross-cultural case studies and community outreach through service learning or career oriented research project that incorporates ethnographic fieldwork strategies, critical reflection on human rights, social justice, and research ethics.

*Prerequisite: take ANTH-220*

**ANTH-420 The Anthropological Study of Family Systems**

3 cr.

Repeatable for Credit: No

Anthropological, cross-cultural view of family systems, with attention to their organization, functions, dynamics and articulation with other institutions.

**ANTH-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**Apparel Design/Manufacturing**

**APRL-134 Global Fashion Industry**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Analysis of the global fashion industry including design, development, merchandising, and manufacturing, with a specific emphasis on brand and organizational development.

**APRL-145 Interior Decorating/Design Textiles**

3 cr.

Repeatable for Credit: No

Fibers and fabrics used in design/decorating planning of residential and commercial settings.

**APRL-166 Apparel Construction I**

3 cr.

Repeatable for Credit: No

Study and application of woven apparel construction techniques, fabric selection, and fit.

**APRL-167 Textiles I: Theory, Fibers and Structures**

3 cr.

Repeatable for Credit: No

Study of fibers, yarns, textiles, and textile manufacturing processes, and how target market needs are addressed through textile selection.

**APRL-180 Pattern Development**

3 cr.

Repeatable for Credit: No

Introduction to flat pattern development for woven garments, with a focus on pattern alterations and fit process for global production.

**APRL-211 History of Fashion-19th Century to Present**

3 cr.

Repeatable for Credit: No

A study of the evolution of fashion from the 19th century to the present concentrating on the impact of the fashion designer and changing fashion trends.

### **APRL-225 Target Market Research and Line Development**

3 cr.

Repeatable for Credit: No

Apparel collection development by researching target markets and trend; hand and computer drawing techniques are utilized to communicate collection development.

### **APRL-250 Textiles II: Evaluation**

3 cr.

Repeatable for Credit: No

Evaluation of materials and products using industry testing equipment, procedures, and standards.

*Prerequisite: Take APRL-167*

### **APRL-272 Quality Analysis of Sewn Products**

3 cr.

Repeatable for Credit: No

Analysis of sourcing and materials for quality product performance and specification development.

*Prerequisite: Take APRL-167*

### **APRL-274 Fashion Industry**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Processes/functional areas in a sewn product enterprise.

### **APRL-286 Apparel Construction II: Cut and Sewn Knits**

3 cr.

Repeatable for Credit: No

Study and application of construction methods specific to stretch fabric sewn products.

*Prerequisite: Take APRL-180*

### **APRL-290 Specifications and Fit Development**

3 cr.

Repeatable for Credit: No

Garment sizing, fit, graded specifications, and pre-production processes of mass produced apparel.

*Prerequisites: Take APRL-180 and APRL-272*

### **APRL-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **APRL-355 Special Topics in Apparel Design/ Manufacturing**

1-3 cr.

Repeatable for Credit: Yes

Special topics in clothing and textiles. Repeatable for different topics.

### **APRL-373 Advanced Pattern Development**

3 cr.

Repeatable for Credit: No

Advanced pattern development by flat pattern making and draping methods, with an emphasis on creative pattern modifications and fit evaluation for global production.

*Prerequisite: Take APRL-180*

### **APRL-390 CAD for Apparel Images**

3 cr.

Repeatable for Credit: No

Using CAD programs, students create and communicate apparel collections for various target markets based on market research.

*Prerequisite: Take APRL-225*

### **APRL-390 Practicum in Textile Design**

3 cr.

Repeatable for Credit: No

Use of textile design techniques as means of artistic expression: stitchery, weaving, knotting, applique and hooking; emphasis on good design and creativity.

*Prerequisite: Take ART-101 with a grade of C or better*

### **APRL-393 Garment Engineering/Production**

3 cr.

Repeatable for Credit: No

Knowledge of the global fashion industry including development, merchandising, and engineering of soft goods production applied in a team-based laboratory simulation.

*Prerequisites: take APRL-134, APRL-250, APRL-286 , and APRL-290*

### **APRL-398 Field Experience**

2-3 cr.

Repeatable for Credit: Yes

A practical work experience within the apparel industry, supervised by a faculty member, requiring a minimum of 180 hours of unpaid work.

Department Consent

### **APRL-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **APRL-405 International Study Tour to the Fashion Industry**

1-6 cr.

Repeatable for Credit: Yes

Tour of international centers of clothing, textiles, and related arts. Study of the cultural patterns. Program includes lectures by consultants and seminars on the various phases of the fashion and fabric industries.

Department Consent

### **APRL-419 National Study Tour to Fashion Industry**

1 cr.

Repeatable for Credit: Yes

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market.

Department Consent

Must be Junior level or higher

### **APRL-449 Cooperative Education Experience**

6 cr.

Repeatable for Credit: Yes

A practical work experience within the apparel industry, supervised by a faculty member, requiring a minimum of 320 hours of paid work over a minimum of eight weeks.

Department Consent

Must have a cumulative GPA of 2.75 or higher and must be at least a Junior.

### **APRL-454 Knit Design, Fabrication and Technology**

3 cr.

Repeatable for Credit: No

Study of knit design, fabrication and technology, including stitches, yarns, texture effects, production and quality issues.

*Prerequisites: Take APRL 167*

### **APRL-464 Functional Design and Development**

3 cr.

Repeatable for Credit: No

Work teams apply physical science theory and creative problem solving methods to innovate functional clothing for specific needs, occupations, and activities.

*Prerequisites: take APRL-250, APRL-286, APRL-290, APRL-373, and APRL-390*

### **APRL-482 Studio I: Brand Development**

3 cr.

Repeatable for Credit: No

Research and develop a personal apparel brand including technical and aesthetic design, promotion and production.

*Prerequisites: Take APRL 373 , APRL 390 , APRL 464 , and APRL-394*

### **APRL-485 Studio II: Collection Development**

3 cr.

Repeatable for Credit: No

Original collection development and presentation of research, design development, production and marketing.

Prerequisite: take APRL-482

### **APRL-498 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department Consent

### **APRL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Applied Science**

### **APSC-101 Applied Science Profession I**

1 cr.

Repeatable for Credit: No

Exploration of career areas of interest; examine appropriate interpretations of scientific measurements and experimental design.

### **APSC-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **APSC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **APSC-311 Issues For Science Professionals**

3 cr.

Repeatable for Credit: No

Proprietorial, ethical, and legal issues affecting the careers of science professionals.

*Must be Junior level or higher & must have taken PHIL-235*

### **APSC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **APSC-398 Field Experience in Applied Science**

1-6 cr.

Repeatable for Credit: Yes

Field experience in Applied Science in an approved position. Guidelines for credit to follow those developed by the University for coop experiences. Students are responsible for an oral presentation and a written report.

Department Consent

### **APSC-401 Applied Science Profession II**

1 cr.

Repeatable for Credit: No

Preparation for the science profession. Assess knowledge base, identify areas of strengths and weaknesses, define plan for further development. Build a professional portfolio and resume, and review interviewing skills. Explore methods of strategic planning and analysis for science professionals.

Must be Senior level or higher



## **APSC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **APSC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Applied Social Science**

### **APSS-100 Introduction to Applied Social Science**

1 cr.

Repeatable for Credit: No

Introduction to social science ideas, ethics and practices. Acquaints students with the Applied Social Science program structure and choices, as well as potential job opportunities in the field.

### **APSS-200 Applied Social Analysis I**

3 cr.

Repeatable for Credit: No

First of three social science research methods courses for the Applied Social Science major; students will learn general research design, literature reviews, multiple qualitative research methods, theory integration into research, and research dissemination strategies.

### **APSS-300 Applied Social Analysis II**

3 cr.

Repeatable for Credit: No

Second of three social science research methods courses for the Applied Social Science major; advanced methodological issues of quantitative inquiry; practical issues of application and evaluation of research tools.

### **APSS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **APSS-399 Independent Study**

1-3 cr.

Repeatable for Credit: No

Department Consent

### **APSS-400 Applied Social Analysis III**

3 cr.

Repeatable for Credit: No

Capstone experience for the undergraduate major in Applied Social Science; develop and conduct an applied research project using theory and evidence to analyze the phenomenon chosen, and to communicate the results.

*Prerequisite: take APSS-300*

### **APSS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **APSS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Art**

### **ART-100 Drawing I**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Study and application of the principles and mechanics of descriptive freehand drawing using black and white media.

### **ART-101 Two-Dimensional Design Foundations**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Principles and elements of two-dimensional design and their application to the foundations of visual expression.

### **ART-102 Introduction to Art and Design**

1 cr.

Repeatable for Credit: No

Introduction to various disciplines and activities in art and design. Not appropriate for General Education requirement.

### **ART-103 Three-Dimensional Design Foundations**

3 cr.

Repeatable for Credit: No

The study of the principles and elements of three-dimensional design and their application to the foundations of visual expression.

*Prerequisite: Take ART-101 with a grade of C or better*

### **ART-114 Color Studio**

3 cr.

Repeatable for Credit: No

Students apply color knowledge to art and design exercises. Content covered includes the physical properties of color, the schools of color theory and influential color theorists, and color vocabulary.

### **ART-145 The Practice of Art**

2-3 cr.

Repeatable for Credit: No

Introduction to current professional practices and historical roles of artists in culture.

Students must be Studio Art or Art Education majors only

### **ART-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ART-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ART-200 Drawing II**

1-3 cr.

Repeatable for Credit: Yes

Study and application of the principles and mechanics of interpretive freehand drawing focusing on invention, and creative investigation using a variety of black and white, color, and mixed media.

*Prerequisite: take ART-100 with a grade of C or better*

### **ART-209 Painting I**

3 cr.

Repeatable for Credit: No

Introduction and investigation of acrylic and/or oil painting.

*Prerequisites: take ART-200 with a grade of C or better*

### **ART-211 Contemporary Sculptural Practices I**

3 cr.

Repeatable for Credit: No

Introduction to sculptural concepts.

*Prerequisite: take ART-103 with a grade of "C" or better*

### **ART-213 Ceramics I**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Study and application of wheel-throwing, hand-building, glazing and firing techniques for ceramics, as a means of visual expression.

### **ART-215 Art Metals I**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Exploration and development of jewelry and other three-dimensional objects made of metal and related materials. An introduction to concept, design development and technical approaches.

### **ART-217 Printmaking I**

3 cr.

Repeatable for Credit: No

Introduction to the concepts and techniques of printmaking.

*Prerequisites: take ART-101 and ART 200, each with a grade of C or better*

### **ART-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ART-256 Art Workshop**

1-3 cr.

Repeatable for Credit: No

Selected art concepts, processes and media will vary to serve special student populations. Credit determined by individual contract.

### **ART-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ART-300 Drawing III**

3 cr.

Repeatable for Credit: Yes

Advanced drawing methodologies with emphasis on media exploration, furthering drawing strategies, exposure to historical and current drawing concerns and independent research.

*Prerequisites: take ART-200 with a grade of C or better*

### **ART-301 Life Drawing I**

3 cr.

Repeatable for Credit: No

Drawing and analyzing the human figure and other natural forms. Translating three-dimensional form to the two-dimensional picture plane.

*Prerequisites: take ART-200 with a grade of C or better*

### **ART-307 Aesthetics in the Studio**

3 cr.

Repeatable for Credit: No

Introduction to the problems of aesthetics, such as interpretation, creation, and experience of art as it relates to studio practices.

*Prerequisites: Take ARTH-223 and ARTH-224; and take ARTH-336 or ARTH-337 (may be taken concurrently). Also, one 300-level or higher studio Art must be taken concurrently.*

## **ART-311 Contemporary Sculptural Practices II**

3 cr.

Repeatable for Credit: No

Continued investigation into contemporary sculptural practices with an emphasis upon expanded research, development of concepts, and exploration of materials.

*Prerequisite: take ART-211 with a grade of "C" or better*

## **ART-315 Art Metals II**

3 cr.

Repeatable for Credit: No

Exploration of intermediate jewelry forms and three-dimensional objects made of metal and related materials. Expanded approaches to conceptual development, design and technical applications. A special course fee applies.

*Prerequisite: take ART-215 with a grade of C or better*

## **ART-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **ART-397 Field Experience for Artists**

1-3 cr.

Repeatable for Credit: No

Work in an approved position or conduct advanced research on an approved topic related to the studio art profession.

Department Consent

*Prerequisite: take ART-145*

## **ART-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **ART-401 Life Drawing II**

3 cr.

Repeatable for Credit: No

Continued drawing and analysis of the structure of the human figure.

*Prerequisite: take ART-301 with a grade of C or better*

## **ART-403 Life Drawing III**

1-3 cr.

Repeatable for Credit: Yes

Self-directed study of Life Drawing; continued development of individual research, drawing skills, and studio discipline.

*Prerequisite: take ART-401 with grade of C or better*

## **ART-409 Painting II**

1-3 cr.

Repeatable for Credit: Yes

Continued investigation of painting issues with a broader range of technical concerns, historical and contemporary approaches through expanded research requirements.

*Prerequisite: take ART-209 with a grade of C or better*

## **ART-410 Painting III**

3 cr.

Repeatable for Credit: Yes

Self-directed study of painting. Continued development of individual research, painting skills, and studio discipline.

*Prerequisite: take ART-409 with a grade of C or better*

## **ART-411 Contemporary Sculptural Practices III**

1-3 cr.

Repeatable for Credit: Yes

Advanced problems in sculpture, through the exploration and utilization of media for creative and expressive ends. Repeatable; topics and projects change

*Prerequisite: take ART-311 with a grade of C or better*



## **ART-413 Ceramics II**

1-3 cr.

Repeatable for Credit: Yes

Use of clay, glazes and kiln for design and production of high-fired ceramics. Initial enrollment must be for 3 credits.

*Prerequisite: take ART-213 with a grade of C or better*

## **ART-414 Color Seminar**

4 cr.

Repeatable for Credit: No

A case-study course exploring methodologies for use of color. Content includes gender-specific, historic, psychological, social, and symbolic use of color; color sensibilities in other cultures; and roots of color beliefs.

*Prerequisites: take PHYS-150, PSYC-432, GCM-367, and ART-114 with a grade of C or better*

## **ART-415 Art Metal III**

1-3 cr.

Repeatable for Credit: Yes

Advanced studio experience in individualized jewelry forms and three-dimensional objects made of metal and related materials.

A continuation of technical skills is coupled with emphasis on conceptual development and critical thinking.

*Prerequisite: Take ART-315 with a grade of C or better*

## **ART-417 Printmaking II**

1-3 cr.

Repeatable for Credit: Yes

Advanced work in the processes of relief, silkscreen, etching or lithographic printmaking. Initial enrollment must be for 3 credits.

*Prerequisite: take ART-217 with a grade of C or better*

## **ART-445 Senior Seminar**

1 cr.

Repeatable for Credit: No

Professional practice including portfolio and senior exhibition; current ideas and career opportunities within the art profession.

*Prerequisites: take ART-145 and ART-307 with a grade of C or better; Prerequisite or concurrent enrollment in ART-307. Must be Senior level, and must be Studio Art or Art Education major.*

### **ART-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ART-456 Advanced Art Workshop**

1-3 cr.

Repeatable for Credit: Yes

Selected art concepts, processes and media will vary to serve special student populations. For students familiar with workshop approach or advanced in art program. Credit determined by individual contract.

### **ART-490 BFA Thesis Exhibition**

1 cr.

Repeatable for Credit: No

Creation and dissemination of a body of artwork produced during the student's senior year.

Instructor's Consent Required

Must be Senior level or higher

### **ART-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Art Education**

### **ARTED-108 Introduction to Art Education**

2 cr.

Repeatable for Credit: No

Fundamental, historical and philosophic components of Art Education with an emphasis on discipline-based Art Education.

### **ARTED-208 Contemporary Theory and Curricular Practices in Art Education**

3 cr.

Repeatable for Credit: No

Seminar and practicum course designed to combine theory and practice in K-12 art instruction. The seminar is devoted directly toward contemporary theory surrounding K-12 art education. The practicum involves 30 hours of partnered art classroom participation, including the planning, instruction, and assessment of an art lesson.

Department Consent

*Prerequisites: take ARTED-108 and Benchmark I*

### **ARTED-308 K-12 Art Education Theory, Methods, and Practice**

4 cr.

Repeatable for Credit: No

Theory, methods, and curriculum development in art education including K-12 art teaching practicum in selected elementary and secondary art classrooms.

*Prerequisites: take ARTED-208 and ARTH-223 and Benchmark I completion*

### **ARTED-408 Student Teaching in Art Education - Elementary**

8 cr.

Repeatable for Credit: No

Directed teaching in elementary art; required student teaching seminars, on-line course participation, and completion of portfolio.

Department Consent

Prerequisite: Benchmark I completion

### **ARTED-409 Student Teaching in Art Education - Secondary**

8 cr.

Repeatable for Credit: No

Directed teaching in secondary art; required student teaching seminars, on-line course participation, and completion of portfolio.

Department Consent

### **ARTED-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ARTED-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Art History**

### **ARTH-222 Introduction to Art**

3 cr.

**Art History**

Repeatable for Credit: No

Art appreciation and historical survey for the non-art major.

### **ARTH-223 Survey of Art--Ancient Through Medieval**

3 cr.

**Art History**

Repeatable for Credit: No

The painting, sculpture, architecture and minor arts in the ancient western world.

### **ARTH-224 Survey of Art-Renaissance Through 20th Century**

3 cr.

**Art History**

Repeatable for Credit: No

Sculpture, painting, architecture and minor arts of western world from 14th century to present.

### **ARTH-225 Introduction to Non-Western Art**

3 cr.

**Art History, Global Perspective**

Repeatable for Credit: No

Cross cultural examination of the history of Non-Western art from a global perspective. Exploration of the arts of Asia, Africa,

the Americas, Oceania, and the Islamic world. Exposure to diverse visual elements and humanistic concerns. Themes include: diversity, identity, religion, politics, representation of self and "the other", and Westernization.

### **ARTH-250 British Art, Architecture, and Design**

3 cr.

#### **Art History, Global Perspective**

Repeatable for Credit: No

Survey of the art, architecture, and design of Great Britain, with travel to the British Isles.

### **ARTH-256 Special topics in Art History: Art in Italy**

3 cr.

#### **Humanities and the Arts - Art History/Music Apprec**

Repeatable for Credit: No

Survey of the art and architecture of Italy, from Antiquity through the 17th Century, with travel to Italy.

### **ARTH-319 History of Design**

3 cr.

Repeatable for Credit: No

Survey of the history of modern design since its origins in the late Renaissance.

*Prerequisites: take ARTH-224 with a grade of C or better and ENGL-101/ENGL-111*

### **ARTH-326 Greek and Roman Art**

3 cr.

Repeatable for Credit: No

The arts of ancient Greece and Rome.

### **ARTH-327 Medieval Art**

3 cr.

Repeatable for Credit: No

The arts of Europe and Byzantium from late Roman Empire to end of Middle Ages.

### **ARTH-328 Italian Renaissance Art**

3 cr.

Repeatable for Credit: No

A chronological, geographic, and thematic survey of art and architecture in Italy from the fourteenth through the sixteenth centuries.

### **ARTH-329 Northern Renaissance Art**

3 cr.

Repeatable for Credit: No

A chronological, geographic, and thematic survey of art in Northern Europe during the late fourteenth, fifteenth and sixteenth centuries.

### **ARTH-330 Baroque Art**

3 cr.

Repeatable for Credit: No

A chronological, geographic, and thematic survey of art and architecture in Europe and the colonial New World in the seventeenth and early eighteenth centuries.

### **ARTH-331 Art and Controversy**

3 cr.

#### **Art History, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Exploration of controversial or provocative works of art that push the boundaries of artistic expression. Consideration of social and historical contexts of provocative imagery. Understanding the delicate balance between differing individual, social, and cultural mores and an artist's right to freedom of expression.

### **ARTH-332 Gender and Art**

3 cr.

Repeatable for Credit: No

Exploration of social and cultural constructions of identity and sexuality from Prehistory to the Modern era. Analysis of the ways in which gender identities can be shaped by politics, religion, and culture, and how an artist's gender and/or sexual preferences affect visual imagery, from subject choices to market values.

### **ARTH-333 History of Interiors and Furnishings**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

A survey of the history of interior design, furniture, and household objects since ancient Egypt.

### **ARTH-335 19Th Century Art In Europe**

3 cr.

Repeatable for Credit: No

History of European art from about 1800 to 1900.

### **ARTH-336 Modern Art**

3 cr.

Repeatable for Credit: No

The main currents and developments in art from Monet and Cezzane to 1950.

### **ARTH-337 Art Since 1950**

3 cr.

Repeatable for Credit: No

Developments in painting and sculpture in Europe and America since 1950.

*Prerequisite: take ARTH-224 with a grade of C or better*

### **ARTH-339 Japanese Art and Culture**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Thematic survey of the art and culture of Japan from pre-history to the present day. Recognition of major styles, appreciation of Eastern cultural ideals, familiarity with influences and borrowings from the West. Class discussions include religion (Shinto, Buddhism), art, culture (tea ceremonies, Kabuki Theater) and literature.

### **ARTH-340 History of Interactive Media**

3 cr.

Repeatable for Credit: No

Survey of historical developments leading to, and in the design of, video games, the Internet, and related media. Must be in a BFA major, Art Ed or GDD major

### **ARTH-341 History of Film**

3 cr.

Repeatable for Credit: No

Evolution of motion picture film as medium of mass communication and aesthetic expression; contributions of noted filmmakers from around the world.

### **ARTH-341 History of Film**

3 cr.

Repeatable for Credit: No

Evolution of motion picture film as medium of mass communication and aesthetic expression; contributions of noted filmmakers from around the world.

### **ARTH-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ARTH-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Biology**

### **BIO-101 Introductory Biology**



4 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Introduction to the science of biology including life processes, cell biology, genetics, molecular biology, evolution, ecology, plant and animal diversity. Living systems are viewed from the sub-cellular to the community level, emphasizing the diversity, functioning, and interaction of whole organisms.

**BIO-111 Science, the Environment and Sustainability**

4 cr.

**Natural Science with Lab, Contemporary Issues, Global Perspective**

Repeatable for Credit: No

Relationship of humans to the natural environment with a focus on sustainability. Ecological principles in relation to global contemporary problems, such as resource utilization, species extinction, human population dynamics, and climate change, with an interdisciplinary approach to problem solving. A special course fee applies.

**BIO-125 Biology of Aging**

3 cr.

**Natural Science**

Repeatable for Credit: No

Understanding the aging process. Physiological, demographic, immunological and overall health aspects of aging.

**BIO-128 Community Health**

2 cr.

**Health and Physical Education - Health**

Repeatable for Credit: No

Disease prevention through education, sanitation, isolation and immunization; public health programs and operation of federal and state laws.

**BIO-130 Human Sexual Biology**

3 cr.

**Natural Science, Contemporary Issues**

Repeatable for Credit: No

Interdisciplinary investigation into human reproductive physiology, from development through reproduction and aging, including contraception and sexually transmitted infections, within a framework of historical context and societal lens.

### **BIO-132 Human Biology**

4 cr.

#### **Natural Science with Lab**

Repeatable for Credit: No

Basic concepts of physiological processes and anatomy of all organ systems of humans, based on dissection of a cat; embryological development.

### **BIO-135 Organismal Biology**

4 cr.

Repeatable for Credit: No

Introduction to the biological sciences, including evolution, an overview of life's diversity, plant biology, animal biology, and ecology. Emphasis on scientific thought processes, laboratory skills, and communication skills.

Must be APSCI, ENVSCI, SCIED, or PRE-HEALTH major

### **BIO-136 College Molecular Cell Biology I**

5 cr.

Repeatable for Credit: No

Introduction to the biological sciences, including cell biology, physiology, and molecular biology. Emphasis on scientific thought processes, laboratory skills, and communication skills. For Applied Science and Science Education majors, and Biology minors.

Must be APSCI, ENVSCI, SCIED, or PRE-HEALTH major

### **BIO-141 Plants and People**

4 cr.

#### **Natural Science with Lab, Contemporary Issues, Global Perspective**

Repeatable for Credit: No

Interdisciplinary investigation into the global economic and cultural importance of plants, how aspects of plant biology have played historical roles in shaping societies around the world, and the roles of plants in solving future societal problems. A special course fee applies.

### **BIO-150 Environmental Science**

2 cr.

#### **Natural Science with Lab, Global Perspective**

Repeatable for Credit: No

The relationship of humans to the natural environment. Study of ecological principles in relation to contemporary problems such as resource utilization, human population dynamics, waste and pollution control.

### **BIO-196 Biology of Women**

3 cr.

Repeatable for Credit: No

Genetics of sex determination, development, anatomy, reproductive biology, intelligence, aging, disease, behavior and evolution as they relate to the biology of women. Offered in Scotland.

### **BIO-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BIO-210 Concepts and Issues in Biotechnology**

2 cr.

**Natural Science, Global Perspective**

Repeatable for Credit: No

Concepts and issues in the field of Biotechnology. Overview of stem cell research, cloning, tissue engineering, artificial organs, genetically modified foods, and others as appropriate.

### **BIO-220 Physiology of Disabilities**

3 cr.

Repeatable for Credit: No

Causes, consequences, prognoses and treatments of diseases and injuries common in today's society. Includes genetic disorders, birth defects, cancers, degenerative disorders, spinal cord injuries, cardiovascular abnormalities and immune disorders.

*Prerequisites: BIO-132 or BIO-234*

### **BIO-234 Physiology and Anatomy**

4 cr.

**Natural Science with Lab**

Repeatable for Credit: No

The structure and function of the human organism at the cellular, organ, and organism levels with emphasis on the physiological control systems and the concept of homeostasis as the unifying concept in physiology.

*Prerequisites: take BIO-101 or CHEM-125 or CHEM-135*

## **BIO-235 Molecular Cell Biology II**

4 cr.

Repeatable for Credit: No

Consideration of eukaryotic cell structure, function and processes.

*Prerequisites: take BIO-135 and CHEM-136*

## **BIO-241 Ornamental Horticulture**

3 cr.

Repeatable for Credit: No

Principles and practices of asexual and sexual plant propagation, identification of plants commonly used in the nursery and floral industry, basic production techniques and overview of production systems.

## **BIO-242 Botany**

4 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Introduction to structure and function of plants, survey of plant kingdom, and structure and life history of representative forms of plant life.

## **BIO-252 Zoology**

4 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Investigation of vertebrate and invertebrate animal life. Diversity, physiology and adaptation of the animal species.

## **BIO-252 Zoology**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Investigation of vertebrate and invertebrate animal life, including phylogenetics, systematics, physiology, and behavioral characteristics.

### **BIO-253 Wildlife Techniques**

2 cr.

Repeatable for Credit: No

Methods of wildlife field sampling and identification.

Prerequisite: BIO-242 or BIO-252

### **BIO-260 Ichthyology - Wisconsin Fishes**

4 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Introduction to the study of fishes, including morphology, taxonomy, classification, evolution, behavior, and general ecology of fishes. Special emphases on field identification of Wisconsin fishes, management of Wisconsin fish populations, and global conservation of fishes.

### **BIO-262 Introduction to Industrial Hygiene and Occupational Health**

3 cr.

Repeatable for Credit: No

Introduction to the field of industrial hygiene and occupational health. The course focuses concepts, terminology, and methodology in the practice of industrial hygiene and identifies resource materials. The class is intended for students majoring in applied science, environmental science, biology, chemistry or health fields; or students wishing to pursue a graduate degree in risk control, safety, industrial hygiene or toxicology.

### **BIO-270 Natural History of the Neotropics**

4 cr.

**Natural Science with Lab, Global Perspective**

Repeatable for Credit: No

Natural history of neotropical marine and terrestrial systems, including coral reefs and rainforests. Focus on patterns and processes underlying biodiversity of the tropics, including ecological principles, specific adaptations, and taxonomy of tropical biota. Introduction to human cultures of the neotropics and their historical and contemporary impacts on biodiversity.

### **BIO-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BIO-306 General Microbiology**

4 cr.

Repeatable for Credit: No

Introduction to microbial life forms including Archaea, Bacteria, and Eukarya. Survey of microbial cell biology, physiology, molecular biology, ecology, and pathogenesis. Bacteriological and molecular methods used to identify microorganisms in natural and artificial environments.

*Prerequisite: take BIO-101 or any CHEM*

### **BIO-322 Plant Pathology**

3 cr.

Repeatable for Credit: No

Principles and concepts of plant pathology, including the impact of plant disease to crop production, environment and society.

*Prerequisite: BIO-242*

### **BIO-323 Dendrology**

3 cr.

Repeatable for Credit: No

Identification, collection, and biology of woody plant species, including trees, shrubs, and vines. Emphasis on species and systems from the Upper Midwest and economically valuable species.

*Prerequisite: take BIO-101, BIO-111, BIO-141, BIO-135, BIO-242 or BIO-252*

### **BIO-324 Vascular Plant Taxonomy**

4 cr.

Repeatable for Credit: No

Plant classification, identification, and evolution. Focus on flowering plant families of the Upper Midwest. Field trips and plant collection required.

*Prerequisite: BIO-242*

### **BIO-325 Aquatic Vascular Plant Taxonomy**

3 cr.

Repeatable for Credit: No

Identification and collection of plant species located in aquatic habitats: lakes, rivers, and wetlands. Plant and community

adaptations to aquatic and wetland environments. Emphasis on species and systems from the Upper Midwest.  
Prerequisite: take BIO-242

### **BIO-332 Genetics**

3 cr.

#### **Natural Science with Lab**

Repeatable for Credit: No

Fundamental principles of genetics, from Mendel to the present; applications to plants, animals and humans. Laboratory reinforces principles studied in lecture and includes performance of genetic crosses, the cell, mitosis/meiosis, use of mathematical tools to analyze data, gene mapping, karyotyping, pedigree analysis, and the concepts of transformation/transduction.

*Prerequisites: take BIO-101 or BIO-135 or BIO-136 or BIO-242 or BIO-252*

### **BIO-336 Infection and Immunity**

4 cr.

Repeatable for Credit: No

Examination of the human immune system and infectious diseases including past epidemics as well as emerging infections in society.

*Prerequisites: Take either BIO-136 or BIO-306 or CHEM-311*

### **BIO-342 Arboriculture**

4 cr.

Repeatable for Credit: No

Practices and principles of tree nursery production, tree selections based on location and tree maintenance over the life of the tree. Procedures for selecting quality plants; planting; and continued care including pruning techniques, diagnostics and safety protocols. The urban landscape is analyzed and challenges of growing trees in an urban environment are assessed.

Prerequisite: take BIO-242

### **BIO-343 Plant Physiology**

4 cr.

Repeatable for Credit: No

The fundamental physiological processes of plants including investigation of the mechanical, physical and biochemical functions of plants.

*Prerequisites: BIO-242 and 100-level CHEM or higher*

### **BIO-350 Ecology**

3 cr.

Repeatable for Credit: No

Interrelationships of organisms with their abiotic and biotic environments.

Prerequisites: take BIO-111 or BIO-135 or BIO-141 or BIO-242 or BIO-252

### **BIO-351 Ecology Laboratory**

2 cr.

Repeatable for Credit: No

Application of ecological methods to answering ecological questions, including research study development, data analysis, and interpretation.

*Prerequisite: take BIO-350 , or concurrent enrollment*

### **BIO-352 Restoration Ecology**

4 cr.

Repeatable for Credit: No

The theory and practice of restoring and managing ecological communities. Laboratory emphasis on creating a management plan for a natural area. Weekend field trip(s) may be required.

*Prerequisite: take BIO-350*

### **BIO-355 Entomology**

4 cr.

Repeatable for Credit: No

Biology of insects and related arthropods, with emphasis on evolution, ecology, behavior, biodiversity, morphology, and systematics. Laboratory emphasizes identification and collection.

*Prerequisites: Take BIO-111, BIO-135, BIO-136, BIO-141, BIO-242, or BIO-252*

### **BIO-358 Introductory Pharmacology**

2 cr.

Repeatable for Credit: No

Discussion of the sites and mechanisms of drug action, mechanisms of drug distribution, biotransformation and elimination. Analgesics and psychoactive drugs, drugs used clinically to impact cardiovascular care and to manipulate the reproductive system.

*Prerequisites: take BIO-132, BIO-234 or CHEM-135*



### **BIO-360 Introduction to Neuroscience**

3 cr.

Repeatable for Credit: No

Investigation of the human nervous system at the molecular, cellular and system level. Organization and function of neuronal cells, sensory receptors, sensory and motor pathways and integration centers. Introduction to electro- physiology, biochemistry of neurotransmitters and receptors, neuropharmacology, development of the nervous system, and consequences of neuronal disease and trauma.

*Prerequisites: BIO-132 or BIO-234*

### **BIO-361 Psychobiology**

2 cr.

Repeatable for Credit: No

Biological basis of human and animal behavior: evolution of physiological and behavioral adaptations of organisms to their environment.

### **BIO-362 Advanced Physiology**

3 cr.

Repeatable for Credit: No

Human physiology with emphasis on integration of the nervous, muscular, cardiovascular, immune, renal, respiratory, digestive and endocrine systems. Cellular and molecular processes are studied. Computer simulations and experiments in frog physiology will be utilized.

*Prerequisites: take BIO-234*

### **BIO-370 Biotechnology**

3 cr.

Repeatable for Credit: No

Theoretical and laboratory experience in recombinant DNA techniques and their applications in the biotechnology industry.

*Prerequisites: take BIO-235 and CHEM-201*

### **BIO-372 Plant Biotechnology**

3 cr.

Repeatable for Credit: No

Presents an overview of the techniques and underlying theory of plant tissue culture and genetic engineering, research and commercial applications, and issues/challenges in the area of plant biotechnology.

*Prerequisites: take BIO-136, BIO-235 and BIO-242*

### **BIO-386 Introduction to Biostatistical Analysis**

3 cr.

Repeatable for Credit: No

Overview of quantitative analytical techniques applied to biological questions using the scientific method. Statistical procedures will encompass descriptive and inferential techniques including graphical display of data, quantitative description, hypothesis testing, and study design as applied to biological and health sciences.

*Prerequisite: Take BIO-135, BIO-136, BIO-242, or BIO-252; and take MATH-121 or equivalent*

### **BIO-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BIO-400 Special Topics in Biotechnology**

1-2 cr.

Repeatable for Credit: Yes

Topics of current or historical importance in the understanding of biotechnology. Designated topics announced prior to start of semester. May be repeated for elective credit.

*Must be Junior level or higher*

### **BIO-406 Food Microbiology**

3 cr.

Repeatable for Credit: No

Methods of food preservation, their effectiveness and related food spoilage by microorganisms. Quality control techniques used to determine presence of specific groups of economically important microorganisms.

*Prerequisite: take BIO-306*

### **BIO-425 Proteomics**

3 cr.

Repeatable for Credit: No

State-of-the-art training in proteomics. Solutions to biological research questions and operation of proteomics equipment such as chromatography devices and mass spectrometers.

Instructor's Consent Required

*Prerequisite: take BIO-235. Must be concurrently enrolled in CHEM-311.*

### **BIO-434 Cadaver Dissection**

3 cr.

Repeatable for Credit: No

Detailed regional exploration, through cadaver dissection, of human anatomical structures with emphasis on appendages, thorax and abdomen. Identification of muscles, blood vessels, nerves and organs.

*Prerequisites: take BIO-234*

### **BIO-444 Problem in Environmental Sustainability**

3 cr.

Repeatable for Credit: No

Integrate knowledge, theory, and practice from the humanities, social and natural sciences to explore current environmental issues and challenges.

*Prerequisites: Junior level or higher and BIO-350*

### **BIO-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BIO-450 Aquatic Ecology and Management**

4 cr.

Repeatable for Credit: No

Principles of lake ecology, water resources degradation, management, and restoration. Diagnosis of water quality problems and solutions with emphasis on field research techniques, empirical modeling, and nutrient budgetary approaches. Integrated research/service experiences.

*Prerequisites: take BIO-350 and CHEM-135*

### **BIO-451 Research Methods in Environmental Science**

3 cr.

Repeatable for Credit: No

Application of environmental research methods to original scientific investigations. Development of advanced skill in environmental data collection methods. Proposal of an original research study. Design, implementation, analysis, and interpretation of study results. Dissemination of research to a broader audience in both written and oral forms.

*Prerequisites:* Take BIO-351, BIO-386 or STAT-320; take ENGL-410 or concurrent enrollment

### **BIO-452 Wetland Ecology**

4 cr.

Repeatable for Credit: No

Physical, biological, and biogeochemical processes that influence wetland systems. Wetland classification, geomorphology, hydrology, biogeochemistry, soil development, succession, plant and animal adaptations, management, restoration, and protection. Techniques used to study wetlands in northern Wisconsin.

*Prerequisites:* take BIO-242 or BIO-252, and take CHEM-135

### **BIO-460 Epidemiology**

3 cr.

Repeatable for Credit: No

Principles of epidemiology, determinants of major public health problems including infectious and chronic diseases, environmental health, and emerging threats.

*Prerequisites:* take BIO-386 or STAT-320

### **BIO-462 Environmental Toxicology**

3 cr.

Repeatable for Credit: No

Environmental toxins found in the air, water, and soil and their impacts on the health and well-being of humans, animals, and plants. Detection, measurement, analysis, and regulation of select classes of contaminants, including emerging contaminants of concern.

*Prerequisites:* take BIO-135, BIO-136, BIO-234, BIO-242, or BIO-252; take CHEM-135

### **BIO-470 Advanced Biotechnology**

5 cr.

Repeatable for Credit: No

Molecular biotechnology, including manipulation of prokaryotic and eukaryotic cells, computer analysis of genomic and proteomic data, and applications in the biotechnology industry.

Instructor's Consent Required

*Prerequisites: take BIO-235 and BIO 370*

### **BIO-489 Advanced Biology Experience**

1-4 cr.

Repeatable for Credit: Yes

Experiences leading to deeper understanding of biological principles.

Instructor's Consent Required

*Must be Junior level or higher*

### **BIO-490 Histotechnician Laboratory Practicum I**

15 cr.

Repeatable for Credit: No

Techniques in tissue preparation, normal microscopic histology, instrumentation, histochemistry, embedding, routine staining, quality control, laboratory management, computer entry and safety.

*Prerequisites: take CHEM-135, MATH-120, BIO-234, and FN-207*

### **BIO-491 Histotechnician Laboratory Practicum II**

15 cr.

Repeatable for Credit: No

Instrumentation used in processing tissues including the cryostat and automatic strainers and cover slippers, various staining techniques for identification of cellular components and biomolecules. Techniques for tissue microtomy, embedding, frozen sectioning, routine and special staining. Special rotations include a visit to a veterinary lab and minimal cross-training in cytology specimen preparation.

*Prerequisites: take BIO-490*

### **BIO-492 Histotechnician Laboratory Practicum III**

6 cr.

Repeatable for Credit: No

Specialization in immunoperoxidase, muscle biopsies, and exposure to electron microscopy. Theory in muscle biopsies, molecular pathology and immunohistochemistry (IHC). Techniques in IHC staining, basic slide interpretation and instrument training.

*Prerequisite: take BIO-491*

### **BIO-493 Bioinformatics Practicum**

3 cr.

Repeatable for Credit: No

Experiences leading to deeper understanding of bioinformatics through participation in a "linked-courses" interdisciplinary learning community. Students will complete a faculty-advised semester research project, write a senior thesis describing their project, present the results in an appropriate research forum, and participate in the learning community journal club.

*Prerequisite: take MSCS-492*

### **BIO-494 Cytotechnology Practicum I**

16 cr.

Repeatable for Credit: No

Theory and practical training in laboratory analysis of human cell morphology and its relation to diseases. Includes basic specimen handling, cytotechnology techniques, and microscopy. Focus is on the female reproductive, respiratory, gastrointestinal, genitourinary organ systems.

*Prerequisites: take CHEM-135, MATH-120, BIO-234, and FN-207*

### **BIO-495 Cytotechnology II**

16 cr.

Repeatable for Credit: No

Theory and practical training in laboratory analysis of human cell morphology and its relation to diseases. Focuses on the following organ systems: effusions, central nervous system, fine needle aspirations, advanced clinical practice, advanced techniques, and management practices.

*Prerequisite: take BIO-494*

### **BIO-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Accounting**

### **BUACT-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work

periods, each one building and expanding on the previous.  
Department Consent

### **BUACT-200 Financial-Managerial Accounting- Engineering Technology**

2 cr.

Repeatable for Credit: No

Survey of financial accounting concepts for a sole proprietorship, partnership, and corporation. Managerial accounting concepts will be covered in use of the annual report, with emphasis on financial statement analysis.

### **BUACT-201 Financial-Managerial Accounting**

3 cr.

Repeatable for Credit: No

Survey of financial accounting concepts for a sole proprietorship, partnership and corporation. Managerial accounting concepts will be covered in the use of the annual report, with emphasis on financial statement analysis including the cash flow statement and budgets.

*BS Engineering Technology, Industrial Management, Applied Science and Graphic Communication Management students only.*

### **BUACT-206 Introduction to Financial Accounting**

3 cr.

Repeatable for Credit: No

Introduction to accrual accounting using the accounting equation and accounting principles; includes preparing and analyzing basic financial statements, financial ratios, and accounting for sole proprietorships and partnerships.

*Must be Sophomore level or higher*

### **BUACT-207 Introduction-Corporate and Managerial Accounting**

3 cr.

Repeatable for Credit: No

Study of accounting for corporations, methods of raising capital, analysis of financial statements, introduction to management accounting, product cost accounting systems, profit planning, management performance measures, and capital budgeting.

*Prerequisite: take BUACT-206*

### **BUACT-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUACT-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUACT-312 Cost Accounting**

3 cr.

Repeatable for Credit: No

Emphasis on concepts and techniques of cost analysis. Application of cost information and discussion of techniques and budgeting.

*Prerequisite: take BUACT-206*

### **BUACT-320 Income Tax Accounting**

3 cr.

Repeatable for Credit: No

Introduction of accounting and legal concepts underlying individual federal income tax laws applicable to gross income, exclusions, business and non-business deductions, gains and losses, credits and tax computations.

*Prerequisite: take BUACT-206*

### **BUACT-335 Accounting for Management Decisions**

3 cr.

Repeatable for Credit: No

Principles, techniques and use of accounting information to make management decisions in planning, operating and controlling activities of a business.

*Prerequisite: take BUACT-207*

### **BUACT-346 Seminar**

1-3 cr.



Repeatable for Credit: Yes

Current Topics in business. (Title will reflect specific business content.)

### **BUACT-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUACT-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUACT-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUACT-498 Business Accounting Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department Consent

### **BUACT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Finance**

### **BUFIN-340 Business Finance**

3 cr.

Repeatable for Credit: No

Study of the techniques used to make investment, financing, and dividend decisions in order to maximize the value of the firm to its owners. Topics include: analysis of financial data in making investment decisions, working capital management, capital budgeting, capital structure, cost of capital, dividend policy and international finance.

*Prerequisites: take BUACT-207, STAT 130 (or higher), and MATH-123 (or higher)*

## **Business International Business**

### **BUINB-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUINB-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUINB-260 International Business**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Detailed analysis of international business functions including the global economy, financial systems, political structures, culture, and ethical implications of international business on sociocultural systems. Understanding and applying international business

concepts is of primary importance.  
*Must be Sophomore level or higher*

### **BUINB-299 Independent Study**

1-3 cr.  
Repeatable for Credit: Yes  
Department Consent

### **BUINB-338 International Logistics**

3 cr.  
Repeatable for Credit: No  
International logistics strategy: customer service, inventory, transportation, packaging, warehousing, storage, exporting, licensure, joint ventures, ownership documentation, terms of trading, organization, financial and management skills.  
*Prerequisites: take BUSCM-338*

### **BUINB-346 Seminar**

3 cr.  
**Global Perspective**  
Repeatable for Credit: No  
Theory and practice of doing business in India by experiencing the culture first-hand. (Study abroad)

### **BUINB-349 Cooperative Education Experience**

1-8 cr.  
Repeatable for Credit: Yes  
Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.  
Department Consent

### **BUINB-367 International Management**

3 cr.  
**Global Perspective**  
Repeatable for Credit: No  
Theory and practice of managing international organizations, including socio-cultural aspects and group dynamics of

international businesses and service organizations.

*Prerequisites: Take BUMGT-304*

### **BUINB-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUINB-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUINB-485 International Marketing**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Principles and policies of marketing goods and services in international markets. Concepts, strategies and policies of world trade and multinational firms.

*Prerequisites: take BUMKG-330*

### **BUINB-488 International Business Practicum**

3 cr.

Repeatable for Credit: No

Assist an actual business in developing their international marketing plan. Students, under the supervision of a faculty member, determine a product's foreign marketability.

Department Consent

*Prerequisite: take BUINB-485*

### **BUINB-489 International Business Policies**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Students develop the ability to solve business problems in the international arena using a scientific approach to decision making by studying business cases on international policy formulation and administration, manufacturing, marketing, finance, accounting, personnel and public relations functions.

*Prerequisites: Take any BUINB course; and take either BUMGT-304 or BUMKG-330 or BUFIN 340 ; and take either ECON-201 or ECON-210*

**BUINB-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**Business Legal****BULGL-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**BULGL-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**BULGL-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BULGL-318 Business Law I**

3 cr.

Repeatable for Credit: No

Law and ethics relative to businesses including the American legal system, the Constitution, contracts, torts, agency and sale of goods are discussed and analyzed through the use of the Uniform Commercial Code, cases and problems. Examine the influence of technology and globalization on businesses with emphasis on law and business.

*Must be Junior level or higher*

### **BULGL-319 Business Law II**

3 cr.

Repeatable for Credit: No

A continuation of Business Law I; includes property, secured transactions, bankruptcy, estates, commercial paper, partnerships, and corporations.

*Prerequisites: take BULGL-318*

### **BULGL-346 Seminar**

1-3 cr.

Repeatable for Credit: Yes

Current Topics in business. (Title will reflect specific business content.)

### **BULGL-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BULGL-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BULGL-401 Legal Environment of Business**

2 cr.

Repeatable for Credit: No

Changing relationship of government and industry: regulatory legislation, administrative agencies, national policies and social control.

### **BULGL-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BULGL-473 Legal Aspects of Construction**

3 cr.

Repeatable for Credit: No

Analysis of contracts and documents used in building construction industry: rights of the parties. Labor relations: law and labor, legality of strikes, legality of picketing and boycott as economic pressure, unfair labor practices, employer and union, rights and responsibilities of supervisor and worker.

### **BULGL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Management**

### **BUMGT-100 Introduction to Business Administration**

1 cr.

Repeatable for Credit: No

Basic business systems processes, their interrelationships and role of business environment. Business Administration Program: advisement, course sequence and job opportunities.

*Students must be Business Administration majors.*

### **BUMGT-115 Understanding Business**

2 cr.

Repeatable for Credit: No

Concepts, functions, and interrelationships of various subdivisions of service and production organizations.

### **BUMGT-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMGT-235 Management Ethics**

3 cr.

#### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Ethical issues organizational decision-makers face in developing stakeholder policies. Understanding essential ethical theories in relation to a broad array of management functions, concepts of corporate social responsibility and development of organizational ethics programs.

### **BUMGT-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMGT-296 Experience China: Global Business and Society**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No



Introduction to values that serve as the foundation for American business organizations, the impact on our global economy, and business response to the challenges of globalization.

### **BUMGT-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMGT-304 Principles of Management**

3 cr.

Repeatable for Credit: No

Management theories, concepts, techniques, and practices in a complex, dynamic, changing and globalizing business world.

Application and analysis of functional or process approach to management including planning, organizing, leading, controlling and determinants of managerial success.

### **BUMGT-346 Seminar**

1-3 cr.

Repeatable for Credit: Yes

Current Topics in business. (Title will reflect specific business content.)

### **BUMGT-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMGT-398 Business Administration Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department Consent

### **BUMGT-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMGT-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMGT-480 Entrepreneurship: Small Business Planning**

3 cr.

Repeatable for Credit: No

Concepts, strategies, and applications involved in entrepreneurship. Profile of entrepreneurs and the risks and rewards, creating products and services for the market place, going into business-- start-up, buy out, franchise--legal and financial aspects.

Preparing a business plan required.

*Prerequisite: take BUMKG-330 or BUACT-206 or BUACT-200*

### **BUMGT-489 Business and Industrial Internship**

1-8 cr.

Repeatable for Credit: Yes

Off-campus work and study in student's area of concentration; approved salaried position with cooperating company for a semester or summer session.

Department Consent

*Must be Junior level or higher*

### **BUMGT-490 Strategic Management and Business Policy**

3 cr.

Repeatable for Credit: No

Formulate, implement, and evaluate strategies in the context of a dynamic, global business environment. Optimize critical

thinking, reasoning, problem solving and presentation skills while becoming familiar with the knowledge, roles, and responsibilities required of managers.

*Prerequisites: Must be Senior level or higher; take BUMKG-330 and BUFIN 340 ; and take ECON-201 or ECON-210*

### **BUMGT-498 Business Administration Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department Consent

### **BUMGT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Management Information Systems**

### **BUMIS-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMIS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMIS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMIS-333 Management Information Systems - Decision Support Systems**

3 cr.

Repeatable for Credit: No

Exploration of business management decision making through utilization of computer software-based decision support systems; employs spreadsheet and database software as an aid to management in making, implementing and controlling decisions. topics include arithmetic, logical, and specialized functions; charting; tables; designing and modifying databases; and creating and editing database reports.

*Prerequisite: take BUACT-206*

### **BUMIS-346 Seminar**

1-3 cr.

Repeatable for Credit: Yes

Current Topics in business. (Title will reflect specific business content.)

### **BUMIS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMIS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMIS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMIS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Marketing**

### **BUMKG-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMKG-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMKG-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMKG-308 Marketing for Non-Profit Organizations**

2 cr.

Repeatable for Credit: No

Strategic marketing planning process, marketing audit, marketing strategy development, positioning concept, market research, marketing mix, communication strategies and ethical issues for nonprofit organizations.

*Must be Sophomore level or higher*

### **BUMKG-330 Principles of Marketing**

3 cr.

Repeatable for Credit: No

Application of current theories to market goods and services to selected markets. Includes role of marketing within a society and firm, marketing mix variables, developing marketing strategy, segmenting markets, and analyzing environmental factors that impact the marketing activities.

### **BUMKG-334 Professional Selling and Market Development**

3 cr.

Repeatable for Credit: No

Overview of selling as a profession; building relationships; the selling process, including prospecting, preparing, presenting, handling objections, closing, and servicing accounts; developing markets; and territory management.

*Prerequisites: take BUMKG-330*

### **BUMKG-335 Sales Management**

3 cr.

Repeatable for Credit: No

Comprehensive survey of sales force management; organizing, staffing, and training a sales force; directing sales force operations; sales planning; and evaluating sales performance.

*Prerequisite: take BUMKG-334*

### **BUMKG-346 Seminar**

1-3 cr.

Repeatable for Credit: Yes

Current Topics in business marketing. (Title will reflect specific content.)

### **BUMKG-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUMKG-350 Digital Marketing Strategy and Practice**

3 cr.

Repeatable for Credit: No

Development and growth of Internet marketing. An examination of e-business basics, business models, current and future trends, major issues, evaluation of model design and Internet marketing plans.

### **BUMKG-370 Integrated Marketing Communications**

3 cr.

Repeatable for Credit: No

Fundamentals of integrated marketing communications; integration of elements of the promotional mix, including advertising, sales promotions, public relations, online marketing, social media and other modern methods of marketing communication.

*Prerequisites: take BUMKG-330*

### **BUMKG-385 Target Marketing**

3 cr.

Repeatable for Credit: No

The study and application of methods used to identify viable market segments; use of demographic, psychographic and cultural research findings to successfully market products and services to various market segments.

*Prerequisites: take BUMKG-330*

### **BUMKG-391 Principles of Social Media Marketing Management**

3 cr.

Repeatable for Credit: No

Review of social media marketing management and the impacts that social media has on marketing strategy, operational strategies, social technology business models, how the conversation economy impacts business, internal and external engagement practices, customer service and reputation management, along with privacy and legal considerations.

*Prerequisites: take HT-344 or BUMKG-330*

### **BUMKG-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BUMKG-436 Marketing Management**

3 cr.

Repeatable for Credit: No

Comprehensive exploration and practical application of marketing activities used to create customer value and marketplace exchanges benefiting the organization and its stakeholders; planning and execution of conception, pricing, promotion, and distribution of ideas, goods, and/or services for an enterprise.

*Prerequisites: take BUMKG-330 and BUACT-207*

### **BUMKG-479 Marketing Research**

3 cr.

Repeatable for Credit: No

Experimental and survey techniques to secure information for successful marketing; primary and secondary sources; data collection, compilation and analysis methods; effective communication of conclusions and recommendations to management.

*Prerequisites: take BUMKG-330 & either STAT 130, STAT-320, or STAT-331*

### **BUMKG-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Retail**

### **BURTL-105 Introduction to Retail Merchandising & Management**

1 cr.

Repeatable for Credit: No

Explore structure, trends and careers in the retail business. Understand the requirements for earning a degree in Retail Merchandising and Management, and identify resources designed to help students succeed at UW-Stout.



### **BURTL-127 Basic Merchandising**

3 cr.

Repeatable for Credit: No

Analyzing the retailing process, the environment within which it operates, and the institutions and functions that are performed. A foundation for students who plan to work in retailing or related disciplines.

### **BURTL-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BURTL-212 Trend Tracking and Forecasting**

3 cr.

Repeatable for Credit: No

Tracking and forecasting of product and consumer trends based on product lifecycle trends, fashion theories, socioeconomic and cultural factors, lifestyles, psychographic and demographic trends in the marketplace.

### **BURTL-222 Computer Applications**

2 cr.

Repeatable for Credit: No Repeatable for various subunits.

Microcomputer applications. Analysis of appropriate data bases. Evaluation of software. Hardware selection criteria appropriate to applications. Comparison of mainframe and microcomputer appropriate applications. Prediction of future applications.

### **BURTL-229 Visual Merchandising**

3 cr.

Repeatable for Credit: No

Specialized study and application of merchandise/ product presentation techniques for individual displays and store designs. Interpreting basic design elements and principles for display; selecting and using of appropriate tools, fixtures, and materials; coordinating visual presentations and other promotional activities to achieve marketing objectives.

### **BURTL-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BURTL-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **BURTL-319 International Economic Trends in Textiles and Clothing**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Economic importance of the textile and apparel industries in the United States and the world.

*Prerequisites: take APRL 167 and ECON-210*

### **BURTL-327 Store Management**

3 cr.

Repeatable for Credit: No

Develop management skills for retail stores of varying size.

*Prerequisites: take BURTL 390*

### **BURTL-329 Retail Promotions**

3 cr.

Repeatable for Credit: No

Planning and execution of all the promotional messages used to communicate with members of a target market.

*Prerequisite: take BURTL-127*

### **BURTL-335 Special Topics in Retail Merchandising and Management**

1-3 cr.

Repeatable for Credit: Yes

### **BURTL-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BURTL-390 Merchandise Planning and Control**

4 cr.

Repeatable for Credit: No

Techniques for financial and unit planning, procurement and control of inventories for successful retail operations.

*Prerequisites: Complete any GE Math course and BUACT-206*

### **BURTL-395 Assortment Planning**

3 cr.

Repeatable for Credit: No

Methods of optimizing retail product assortments to gain a competitive advantage

*Prerequisites: take BURTL-390 and APRL 272*

### **BURTL-398 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department Consent

### **BURTL-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes  
Department Consent

### **BURTL-417 Social/Psychological Aspects of Clothing**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Social and psychological influence of dress on individual and group behavior patterns.

### **BURTL-419 National Study Tour to Fashion Industry**

1 cr.

Repeatable for Credit: Yes

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market.

Department Consent

*Must be Junior level or higher*

### **BURTL-425 Current Retail Strategies for a Differential Advantage**

2 cr.

Repeatable for Credit: No

Comparative analysis of specific retail corporations' strategies to gain a differential advantage with their merchandising and operational methodology.

*Prerequisites: Must be Senior level and have taken BURTL-127*

### **BURTL-426 Fashion Retailing Practicum**

4 cr.

Repeatable for Credit: No

Observation and structured experience in merchandising procedures dealing with complete operations and management of retail establishment.

*Prerequisites: take BURTL-329 and BURTL-390*

### **BURTL-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.  
Department Consent

### **BURTL-449F Retail Co-Op Education/Internship**

1-6 cr.

Repeatable for Credit: No

Full-time work and training in an approved position at a pre-selected business related to the student's major. Selection by application and interview.

Department Consent

*Prerequisites: take BURTL-398, must be a Senior, and must have a 2.5 GPA in professional core courses.*

### **BURTL-450 Retail Practicum I**

2 cr.

Repeatable for Credit: No

Strategic planning for merchandising and operating the student operated laboratory store to include market analysis, assortment planning, product development, merchandise procurement, promotional planning, merchandise presentation and store layout.

*Prerequisites: take BURTL-390*

### **BURTL-451 Retail Practicum II**

2 cr.

Repeatable for Credit: No

Structured experience in executing the merchandising and operation plan developed in Retail Practicum I to include evaluation of retail performance and projections for continuing operation of the student-operated retail store.

*Prerequisites: take BURTL-390 and BURTL-450*

### **BURTL-477 Study Abroad - American Fashion College**

16 cr.

Repeatable for Credit: No

A program for selected students which offers an opportunity to study at the American Fashion College in London with the opportunity to travel in Europe.

Department Consent

*Must have 2.5 GPA in Professional core and must be Apparel/Design & Development or Retail Merchandise/Management major.*

## **BURTL-490 Advanced Merchandise Planning Control**

3 cr.

Repeatable for Credit: No

Application of merchandise theory and techniques to budget, manage, and adjust actual purchases, inventory, and sales of an actual retail business.

*Prerequisite: take BURTL-390 with a "B" (3.0) or better.*

## **BURTL-498 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department Consent

## **BURTL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Business Supply Chain Management**

### **BUSCM-100 Introduction to Supply Chain Management**

1 cr.

Repeatable for Credit: No

Overview of the B.S. in Supply Chain Management with emphasis on planning, career opportunities, and emerging trends.

### **BUSCM-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUSCM-338 Principles of Logistics**

3 cr.

Repeatable for Credit: No

Applies systems approach to plan movement and storage of raw materials, components and finished goods from point of origin to point of consumption. Focuses on transportation and warehousing decisions, channel structures, physical distribution, materials management, and supply chain concepts.

*Prerequisites: take BUMKG-330*

### **BUSCM-341 Global Supply Chain Modeling and Optimization**

1 cr.

Repeatable for Credit: No

Introduction to problem solving and design techniques used to ensure the optimal operation of the supply chain, considering the relative changes to variables and the impact on overall costs. Advanced spreadsheet toolsets will enable the supply chain problem-solving and design techniques.

### **BUSCM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUSCM-437 Procurement, Sourcing and Supply Chain Management**

3 cr.

Repeatable for Credit: No

Processes used in procuring goods and services; analyzing and selecting global sources of supply; economics of total cost of ownership; importance of quality, delivery, ethics, and legal aspects of supplier management; negotiation principles.

Recommended: proficiency with spreadsheet software.

*Prerequisites: take BUMKG-330*

### **BUSCM-439 Seminar: Supply Chain Systems Design**

3 cr.

Repeatable for Credit: No

Synthesizing experience in supply chain, cases, problems and team/individual research will focus on analyzing, designing and modeling cost effective supply chain systems that utilize innovative technology and business practices for procuring, manufacturing, storing, and moving goods from suppliers, manufacturers, distributors, retailers and end customer.

*Prerequisites: take BUSCM 338 and INMGT-305*

### **BUSCM-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **BUSCM-458 Negotiation and Contracts**

3 cr.

Repeatable for Credit: No

Processes, analysis, techniques and strategies used to negotiate and develop contracts. Defining roles and importance of relationships. Identifying interests, developing and using power, creating and evaluating criteria, exploring options, analyzing offers, dealing with objections and impasses, reaching final agreement. Converting business agreements into contracts. Importance of fairness and ethics.

*Prerequisite: take BUSCM 437*

### **BUSCM-460 Supply Chain Management Design I Capstone**

3 cr.

Repeatable for Credit: No

Synthesizing capstone experience focuses on planning, diagnosing and analyzing root causes of poor supply chain cost, service and operational performance. Students analyze and diagnose supply chains for strategy, organization, process, technology, business models, best practices, and information and material flow.

*Prerequisites: take BUSCM-338, INMGT-320, INMGT-325, INMGT-365, INMGT-405, INMGT-440, BUSCM-437, and BUACT*

### **BUSCM-461 Supply Chain Management Design II Capstone**

3 cr.

Repeatable for Credit: No

Continuation of Supply Chain Design I focusing on design, model and recommended integrated supply chain solutions from the perspective of strategy, people, technology, business models, and best practices for managing the flow of goods and information across the supply chain.

*Prerequisite: take BUSCM-460*



## **Career and Technical Education**

### **CTE-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department Consent

### **CTE-198 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **CTE-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CTE-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department Consent

### **CTE-298 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **CTE-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CTE-301 Preservice Workshop for Career and Technical Educators**

1 cr.

Repeatable for Credit: No

Introduction to the basic concepts of teaching courses in Wisconsin career and technical education.

### **CTE-302 Principles of Career and Technical Education**

2-3 cr.

Repeatable for Credit: No

Importance of career and technical education (workforce education) to American society and the individual. Actively apply principles into practice. Formulate a philosophy of workforce education based on personally held principles and demonstrated practices.

### **CTE-310 Foundations of Health Sciences Occupations Education**

3 cr.

Repeatable for Credit: No

The philosophy, organization and administration of health science occupations education at the national, state and local level; includes current topics in health science occupations education with application for personnel in the field.

### **CTE-320 Careers in Health Care**

3 cr.

Repeatable for Credit: No

Investigation of health care delivery system, services, occupations, related health services, and the health sciences career clusters.

### **CTE-330 Curriculum Planning in Health Science Occupations**

3 cr.

Repeatable for Credit: No

Competency-based and individualized approaches to principles of curriculum and course construction, study of curriculum terminology, methods of selecting and organizing content for health science occupations educators.

### **CTE-334 Performance Analysis**

3 cr.

Repeatable for Credit: No

Analysis techniques utilized in curriculum development. Emphasis on task analysis and related procedures. Includes occupational and needs analysis, competency identification, objective writing and information mapping. Integrates task analysis with a total system for developing and revising career and technical education curriculum or job training programs.

### **CTE-337 Competency-Based Education: Career and Technical**

2 cr.

Repeatable for Credit: No

Competencies for career, technical and adult education programs and courses. Development of competency-based education performance indicators in all domains, a competency-based education management system, and basis for competency-based education evaluation.

### **CTE-346 Seminar**

1-3 cr.

Repeatable for Credit: No

Current Topics in career, technical and adult education with application for personnel in the field.

Instructor's Consent Required

### **CTE-346 Seminar: Aligning Career and Technical Education Curricula**

2 cr.

Repeatable for Credit: No

Current topics in career, technical, and adult education with application for personnel in the field. Aligning secondary and postsecondary career and technical education curricula based on career pathways.

### **CTE-346 Seminar: Sustainable Concepts Infusion I**

1 cr.

Repeatable for Credit: No

Understanding and implementation of a sustainable culture. Development of implementation strategies for sustainable concepts infusion within instructional courses. Implementation and assessment of developed plans.

### **CTE-346 Seminar: Sustainable Concepts Infusion II**

1 cr.

Repeatable for Credit: No

Understanding and implementation of a sustainable culture. Development of implementation strategies for sustainable concepts infusion within instructional courses. Implementation and assessment of developed plans.

### **CTE-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department Consent

### **CTE-359 Technology Impacts Occupational Programs**

4 cr.

Repeatable for Credit: Yes

Presentation of latest technology in communications, manufacturing, construction, and/or transportation which involve concepts from math, science and computer science.

### **CTE-360 Coordination of Work-based Learning (WBL) Programs**

3 cr.

Repeatable for Credit: No

Philosophy, planning, initiation, organization, coordination, evaluation, and teaching techniques of Cooperative Career and Technical Education (C-CTE) programs. Special emphasis on roles, responsibilities and duties of the cooperative teacher-coordinator.

### **CTE-375 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **CTE-398 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **CTE-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CTE-405 Methods of Teaching Career and Technical Education**

2-3 cr.

Repeatable for Credit: No

Competency-based and individualized approach to methods of teaching career and technical education.

No prerequisite for CTET students who enroll for 2 credits.

### **CTE-408 Student Teaching in Career and Technical Education**

1-4 cr.

Repeatable for Credit: Yes

Application of teaching and learning knowledge and skills to a post-secondary education or training institution setting.

Department Consent

### **CTE-438 Course Construction in Career and Technical Education**

2-3 cr.

Repeatable for Credit: No

Focus on curricula design principles and practices in Career and Technical Education (CTE). Content will challenge personally held ideas, assumptions, and practices related to curricula and its stakeholders. The products of learning include standards-based

course, lesson, and assessment tools that are anchored to the mission, goals, and standards specific to the teacher-candidates' CTE program area. Benchmark 1 is required for MBE, FCSE, and TECED students, who must enroll for 3 credits.  
No prerequisite for CTET students who enroll for 2 credits.

### **CTE-440 Instructional Evaluation in Career and Technical Education**

2-3 cr.

Repeatable for Credit: No

Competency-based and individualized approach to instructional evaluation for career and technical educators. Prepares educators to design and implement performance-based assessment in diverse formats and settings that evidence student learning.

No prerequisite for CTET students who enroll for 2 credits.

### **CTE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department Consent

### **CTE-460 Data Responsive Planning, Teaching and Assessment**

3 cr.

Repeatable for Credit: No

Teaching, planning and assessment of student learning through curriculum-based evidence collection and analysis in an effort to monitor and revise lessons, strategies, assessments (formative and summative), courses and programs.

### **CTE-474 Adult Education**

2 cr.

Repeatable for Credit: No

Philosophy and history of adult education in the United States. Techniques for teaching adults: psychological factors, methods, adult interests and characteristics.

### **CTE-488 Career and Technical Education Internship**

1-8 cr.

Repeatable for Credit: No  
Department Consent

### **CTE-498 Field Experience**

1-2 cr.  
Repeatable for Credit: No  
Department Consent

### **CTE-499 Independent Study**

1-3 cr.  
Repeatable for Credit: Yes  
Department Consent

## **Chemistry**

### **CHEM-105 Visualizing Chemistry**

2 cr.  
**Natural Science**  
Repeatable for Credit: No  
Simple demonstrations that illustrate and reinforce understanding of the physical and chemical properties of matter. Description of the underlying chemistry and chemical safety. A special course fee applies.

### **CHEM-110 Chemistry in Our World**

4 cr.  
**Contemporary Issues, Laboratory, Natural Sciences - Physical Sciences**  
Repeatable for Credit: No  
Fundamental role of chemistry in our daily lives focusing on contemporary issues to introduce chemical concepts, developing these concepts in a concerted manner to gain understanding of the issues.  
*Requires Math proficiency greater than or equal to MATH-110*

### **CHEM-115 General Chemistry**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Fundamental principles of chemistry with applications: composition and structure of matter, formation and naming of compounds, mole concept, writing and balancing chemical equations, types of reactions, elementary stoichiometry, bonding, states of matter, equilibrium, solutions, acids and bases. Students may incur incidental expenses for software.

*Math Placement or MATH-110 required.*

**CHEM-125 Principles of Chemistry for Health Sciences**

5 cr.

**Natural Science, Laboratory**

Repeatable for Credit: No

Principles of chemistry: general, reaction stoichiometry, equilibrium and thermodynamics. Students may incur incidental expenses for software.

*Math Placement or MATH-110 required.*

**CHEM-135 College Chemistry I**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Principles of inorganic chemistry, properties of important elements and compounds. More rigorous approach and more extensive coverage than in CHEM 115. Normally followed by CHEM 136. Students may incur incidental expenses for software.

*Math Placement or MATH-120*

**CHEM-136 College Chemistry II**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Reactions and properties of common elements and inorganic compounds; oxidation-reduction and solution equilibria; electrochemistry. Lab work in qualitative analysis for common ions. Students may incur incidental expenses for software

*Prerequisites: take CHEM-135 or take MATH-120 and CHEM-125*

**CHEM-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent



### **CHEM-201 Organic Chemistry I**

4 cr.

Repeatable for Credit: No

Chemistry of carbon compounds: naming, bonding, structure, physical characteristics, reactions. Compounds include hydrocarbons, aromatic compounds, alcohols, ethers, aldehydes, ketones, acids, esters, amines, amides, thiols and sulfides. Laboratory exercises on compound characteristics (physical and chemical), compound identification, reactions and reaction types. Students may incur incidental expenses for software.

*Prerequisite: Take either CHEM-125 or CHEM-135*

### **CHEM-204 Organic Chemistry II Lecture**

3 cr.

Repeatable for Credit: No

Continuation of Organic Chemistry I; organic reactions, organic compound synthesis, reaction to mechanisms and kinetics, transition state theory, thermodynamics; introduction to IR, NMR and UV-visible spectroscopy of organic compounds.

*Prerequisite: take CHEM-201*

### **CHEM-206 Organic Chemistry II Laboratory**

1 cr.

Repeatable for Credit: No

Systematic identification of organic compounds using chemical, physical, and instrumental methods with option for organic compound synthesis.

*Prerequisite: take CHEM-201; Corequisite: take CHEM-204*

### **CHEM-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Instructor's Consent Required

### **CHEM-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes  
Department Consent

### **CHEM-301 Physical Chemistry Lecture**

3 cr.

Repeatable for Credit: No

Fundamental physical chemistry; behavior of gases, liquid state, properties of solutions, principles of thermodynamics, thermochemistry. Taken concurrently with CHEM 303. Students may incur incidental expenses for software.

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135, and take MATH-156;*

*Corequisite: CHEM-303*

### **CHEM-303 Physical Chemistry Laboratory**

1 cr.

Repeatable for Credit: No

Lab course to be taken concurrently with CHEM 301. Experimental techniques and apparatus; treatment of experimental data.

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135, and take MATH-156;*

*Corequisite: take CHEM-301*

### **CHEM-311 Biochemistry**

4 cr.

Repeatable for Credit: No

Fundamental chemistry and metabolism of carbohydrates, lipids and proteins; second- and third-order structure of proteins; chemistry of nucleic acids; nature and dynamics of enzymes and enzyme action; biological oxidations; lab work in metabolism, chromatography, enzyme action, qualitative and quantitative analytical procedures.

*Prerequisite: take CHEM-201*

### **CHEM-315 Food Chemistry**

3 cr.

Repeatable for Credit: No

Organic biochemistry of foods: enzymatic and non-enzymatic changes associated with food preparation and storage (Maillard-Browning reaction), denaturation of protein, changes in color, odor, texture and nutritive value. Techniques for isolation and identification of biochemical constituents of foods.

*Prerequisites: take CHEM-201*

### **CHEM-325 Chemistry of Polymers**

4 cr.

Repeatable for Credit: No

Basic science of polymers. Common industrial polymers and their applications. Relationship of the structure and salient structural features of industrial polymers with their properties and applications.

*Prerequisite: take CHEM-135*

### **CHEM-331 Quantitative Analysis**

3 cr.

Repeatable for Credit: No

Introduction to the principles of quantitative chemical analysis and training in precision laboratory techniques.

*Prerequisite: take CHEM-136*

### **CHEM-335 Instrumental Methods of Analysis**

3 cr.

Repeatable for Credit: No

Application of instrumental methods to chemical analysis: electrochemical, spectrophotometric, chromatographic, and thermal analysis. Techniques for methods development, sample preparation, optimization of operating conditions, and data analysis needed to obtain accurate, reproducible results by means of instrumentation.

*Prerequisite: take CHEM-331*

### **CHEM-341 Chemistry of Materials**

4 cr.

Repeatable for Credit: No

Relationship of the chemistry and microstructure of structural materials (metals, polymers and ceramics) to their properties; degradation of those materials, corrosion of metals, polymers and ceramics.

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135*

### **CHEM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CHEM-353 Environmental Chemistry**

3 cr.

Repeatable for Credit: No

Principles and origins of chemical reactions that lead to ecological imbalance; systems that have contributed to large-scale environmental pollution or are of current importance; chemical technology needed to correct imbalance.

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135*

### **CHEM-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CHEM-412 Advanced Biochemistry**

3 cr.

Repeatable for Credit: No

Structure and function of enzymes and membrane-bound proteins, enzyme kinetics and mechanism, and regulatory mechanisms of metabolism at the molecular, cellular and organismal levels.

*Prerequisite: take CHEM-311*

### **CHEM-440 Advanced Materials Laboratory**

1-3 cr.

Repeatable for Credit: Yes

Student-devised laboratory experiments to solve a materials problem provided by the instructor.

Instructor's Consent Required

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135*

### **CHEM-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **CHEM-452 Environmental Regulations Management**

3 cr.

Repeatable for Credit: No

Laws governing environmental issues. Environmental regulations, applicability of the laws, and resources for interpreting the regulations. Evaluation of environmental research.

*Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135*

## **CHEM-489 Advanced Chemistry Experience**

1-4 cr.

Repeatable for Credit: Yes

Research experiences leading to a greater depth of understanding of chemical principles.

Instructor's Consent Required

*Must be Sophomore level or higher*

## **CHEM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Chinese**

### **CHIN-101 Elementary Chinese I**

4 cr.

**Communication Skills Language, Global Perspective**

Repeatable for Credit: No

Elementary modern Mandarin, for students with no previous training.

### **CHIN-102 Elementary Chinese II**

4 cr.

**Communication Skills Language, Global Perspective**

Repeatable for Credit: No

Continuation of CHIN 101.

### **CHIN-196 Experience China: Mandarin Language**

3 cr.

#### **Foreign Language Global Perspective, Foreign Language and Culture**

Repeatable for Credit: No

Introductory reading, writing, listening and speaking skills; and understanding Chinese culture and society.

Department Consent

### **CHIN-200 Intermediate Chinese I**

4 cr.

#### **Communication Skills Language**

Repeatable for Credit: No

Build on skills learned in CHIN-102 to improve all four aspects of Chinese language acquisition: speaking, listening, reading and writing.

*Prerequisite: take CHIN-102*

## **College of Arts, Humanities and Social Sciences**

### **CAHSS-196 An Interconnected World: Views from the Humanities**

3 cr.

#### **Interdisciplinary Studies**

Repeatable for Credit: No

Draws on history, literature, drama, philosophy, art, and music in order to examine selected issues or problems that have faced humankind around the world during the past two centuries.

### **CAHSS-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CAHSS-205 Scotland: Society And Globalization**

3 cr.

**Humanities and the Arts - Art History/Music Appreciation, Humanities and the Arts - History, Social and Behavioral Sciences - Economics, Social and Behavioral Sciences - Political Science, Social and Behavioral Sciences - Sociology**

Repeatable for Credit: No

A wide-ranging course that explores the different aspects of contemporary Scottish society. Locating Scotland in its historical and global contexts, the course focuses on many of the key social, economic, cultural and political issues that face Scotland today. In particular, it considers many of the ways that globalization can be said to be impacting on Scottish economy and society. Multi- and inter-disciplinary approach drawing on sociology, social policy, social history, and human geography.

**CAHSS-210 Scotland: Heritage and Culture**

3 cr.

**Global Perspective, Interdisciplinary Studies**

Repeatable for Credit: No

Exploration of themes in Scottish culture. Engagement in the Scottish cultural traditions, heritage, geography, sports, and societal features of modern Scotland.

Department Consent

**CAHSS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**CAHSS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**CAHSS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CAHSS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CAHSS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CAHSS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **College of Education, Health and Human Sciences**

### **CEHHS-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Department Consent

### **CEHHS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Computer/Electrical Engineering**



## **CEE-205 Circuit Analysis and Design**

4 cr.

Repeatable for Credit: No

Kirchhoff's voltage/current laws, node/loop analysis, dependent sources and operational amplifiers. Modeling ideal/real resistors/capacitors/inductors, steady state/transient behavior of circuits. Sinusoids, phasors, impedance, steady state AC analysis, power factor, resonance, and frequency response. Single/three phase power distribution and transformers. MultiSim, MATLAB, Function generators and oscilloscopes in laboratory.

*Prerequisite: take MATH-154 or MATH-157*

## **CEE-215 Electronics**

4 cr.

Repeatable for Credit: No

Introduction to the physics/modeling of semiconductor devices such as diodes and transistors. Biasing, small/large signal circuit behavior, temperature dependence. Differential/multistage/power amplifiers. Time and frequency response of devices and circuits, including operational amplifiers. Discussion of integrated circuit fabrication technology.

*Prerequisite: Take CEE-205*

## **CEE-225 Digital Logic**

3 cr.

Repeatable for Credit: No

Analysis and design of combinational and sequential logic circuits. Boolean algebra, number systems and logic gates. Realization of Boolean Functions. Synchronous and asynchronous sequential logic: counters and registers. Finite state machines, state transitions and state equivalence. Logic circuit simulation. Discrete gates and array logic laboratory experiments.

*Prerequisite: take CEE-205 (or concurrent registration)*

## **CEE-235 Signals and Systems**

3 cr.

Repeatable for Credit: No

Continuous-time and discrete-time signals and systems; representation and analysis of linear, time-invariant systems; differential and difference equations; convolution; Fourier, Laplace and Z-transforms; Fourier series; time- and frequency-domain analysis; sampling theorem; introduction to advanced signal processing topics.

*Prerequisites: take CEE-205 and MATH-250*

## **CEE-325 Digital System Design**

3 cr.

Repeatable for Credit: No

Analysis of combinational and sequential logic and state machine designs. Circuit realization utilizing CADD tools on field programmable gate array devices. Behavioral and structural modeling of digital system designs through implementation of computer system components, and memory using hardware description language.

*Prerequisites: Take CEE-205 and CEE-225*

### **CEE-335 Automatic Control Systems**

4 cr.

Repeatable for Credit: No

Classical methods of analysis and design for continuous-time control systems with Laplace transform techniques for solving differential equations, modeling of dynamic systems in time and frequency domains, root-locus and stability analysis.

Introduction to controller design and programming for embedded-servo control systems and PC-based data acquisition in controls.

*Prerequisites: take CEE-235 and CS-244*

### **CEE-345 Microprocessor System Design**

3 cr.

Repeatable for Credit: No

Study of the internal organization of microprocessors, instruction sets, timers and interrupts, and serial and parallel ports programming using Assembly and C languages. The design and interfacing of peripherals for a selected microprocessor and use of debugger hardware including an in-circuit serial programmer unit.

*Prerequisites: take CEE-325 and CS-245*

### **CEE-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CEE-355 Applied Electromagnetics**

3 cr.

Repeatable for Credit: No

Engineering applications of electromagnetic fields. Review of vectors, static electric and magnetic fields, the electromagnetic spectrum, Maxwell's equations and electromagnetic wave propagation in various guided and unguided media. Relationship

between circuit theory and electromagnetic fields, transmission lines, waveguides and antennas. Use of computer aided analysis tools.

*Prerequisites: take CEE-205 and PHYS-282*

### **CEE-405 Capstone I: Computer Engineering Design**

2-3 cr.

Repeatable for Credit: No

First of two-semester sequence in capstone design. Creation of a conceptual design to solve a hardware and software problem that requires research, problem solving, teamwork, communication skills, project management, documentation, simulation, experimentation, and other skills acquired during computer engineering undergraduate study.

*Prerequisites: Take CEE-325, CEE-335, and CEE-345*

### **CEE-410 Capstone II: Computer Engineering Design**

2-3 cr.

Repeatable for Credit: No

Continuation of CEE-405. Implementation, prototyping, and testing of the conceptual design developed in CEE-405; efficient management of time and resources for the successful completion of the project. Status reports, a project report, and a final presentation are required.

*Prerequisite: take CEE-405*

### **CEE-425 Data Communications and Computer Networks**

3 cr.

Repeatable for Credit: No

Design and implementation of data communications and computer network systems. Open systems interconnect models vs. internet models. Transport control protocol/internet protocol algorithms, routing techniques, network security, network management, traffic characterization using discrete-time simulation tools by applying statistical methods, hardware development and implementation of network enabled devices.

*Prerequisites: take CEE-235 and CS-441 (or concurrent registration)*

### **CEE-435 Digital Signal Processing**

3 cr.

Repeatable for Credit: No

Fourier analysis of continuous-time and discrete-time signals and systems; sampling theory, aliasing and signal reconstruction; analysis of sampled signals; discrete and Fast Fourier transforms; ztransform; discrete convolution; design of digital finite impulse response (FIR) and infinite impulse response (IIR) filters; practical applications with simulation programs and hardware systems.

*Prerequisite: take CEE-235*

### **CEE-445 Embedded System Design**

3 cr.

Repeatable for Credit: No

Structured approach to the development and design of microprocessor, microcontroller, and mixed-signal embedded systems. Microprocessor types, memory structures, interrupt control, external interfacing, embedded sensing, and software including assemblers and higher level language support will be emphasized. Laboratory experiments for the design and implementation of an embedded system project.

*Prerequisite: take CEE-345*

### **CEE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CEE-455 Fundamentals of Wireless Communications**

3 cr.

Repeatable for Credit: No

Design and analysis of wireless communication systems, frequency allocations, network architectures. Amplitude, frequency and phase modulation. Time and frequency multiplexing. Information content, channel bandwidth, modulation schemes. Calculation of path loss, fading, scattering and shadowing. Signal encoding and error control. Broadband, spread spectrum and multiple access systems.

*Prerequisites: take CEE-235 and CEE-355 (or concurrent registration)*

### **CEE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **Cross-Media Graphics**

#### **CMG-141 Cross-Media Graphics**

3 cr.

Repeatable for Credit: No

Overview of the cross-media graphics field and careers. Hands-on introduction to the graphics process from design through delivery. Use of graphics software to design and develop projects for crossmedia, multi-channel distribution - print, web, email and mobile. Printing processes, bindery and finishing operations, and specifying printed products and non-print graphic services.

### **CMG-151 Graphics Software Tools**

3 cr.

Repeatable for Credit: No

Graphics software tools and processes for production/development of print and non-print graphics projects. Software features and application, image capture/creation, page layout, web development, imposition principles, proofing, and platemaking.

*Prerequisite: take CMG-141*

### **CMG-251 Premedia Graphics Production**

3 cr.

Repeatable for Credit: No

Optimization of digital creation, capture and manipulation of graphics for print and digital distribution. Premedia systems, workflow, color theory, digital photo, bitmap and vector graphic creation and editing. File and font management, document layout, automation, proofing, preflight and submission of files for output.

*Prerequisite: take either CMG-151 or DES-220*

### **CMG-266 Press Systems**

3 cr.

Repeatable for Credit: No

Imaging of various substrates utilizing common printing processes. Offset lithography, flexography, gravure, and digital reproduction methods. Image carriers, press systems, process control, ink, toners, and substrates.

*Prerequisite: take CMG-141*

### **CMG-270 Postpress Operations**

3 cr.

Repeatable for Credit: No

Current and emerging technologies for postpress operations in bindery and finishing. Postpress production and job planning from the postpress perspective. Quality control tools and techniques as applied to postpress operations.

*Prerequisite: take CMG-141*

### **CMG-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CMG-351 Cross-Media Personalization**

3 cr.

Repeatable for Credit: No

Software, systems and processes used to plan and produce personalized and integrated cross-media (Web, print, e-mail, mobile, digital media) marketing/promotion campaigns. Databases, layout issues, dynamic content (text, images, charts and graphs), scripting, automation, variable data digital printing and personalization, through design platforms and web storefront interaction.

*Prerequisites: take CMG-251 and ICT-375*

### **CMG-355 ePublishing**

3 cr.

Repeatable for Credit: No

Techniques and processes for creating published digital media. Design considerations, file formats, digital asset and rights management, digital publishing standards and issues specific to long documents. Portable Document Format files, eBook formats and other standards for digital documents. Extensible Markup Language (XML) in print and digital media workflows.

*Prerequisite: take CMG-251*

### **CMG-362 Screen and Specialty Printing**

3 cr.

Repeatable for Credit: No

Screen, and other specialty printing on a variety of substrates. Wide format, three-dimensional, lenticular, cut vinyl graphics, dye sublimation, pad printing, laser marking/engraving, issues and process-control concerns unique to these image transfer methods. Special course fee applies.

*Prerequisite: take CMG-141*

### **CMG-367 Color Management**

3 cr.

Repeatable for Credit: Yes

Industry Standards-based color management practices for accurate color reproduction throughout both RGB and CMYK

workflows. Colorimetric and densitometric analysis, device calibration, and profiling strategies. Color management applications, devices and best practices for controlling image capture, image display, electronic publishing, soft proofing and printing.  
*Prerequisites: take CMG-251 and CMG-266 and take either STAT 130 or STAT 320*

### **CMG-368 Print Optimization**

3 cr.

Repeatable for Credit: No

The application of industry specifications to optimize print reproduction. Instrumentation, press fingerprinting and applied color management.

*Prerequisite: take CMG-367*

### **CMG-380 Cross-Media Estimating and Planning**

3 cr.

Repeatable for Credit: No

Cross-media graphics workflow management issues including cost of production or services, estimating practices, planning and scheduling of both print and non-print graphic projects.

*Prerequisites: take CMG-251, CMG-266 and CMG-270*

### **CMG-443 Cross-Media Practicum**

3 cr.

Repeatable for Credit: Yes

Integration of all cross-media graphics processes in the design and production of print and non-print graphic products and services for clients in the university community. Special emphasis on the process and workflow management roles of estimating, customer service, scheduling, planning, production supervision and quality control.

*Prerequisites: take CMG-380*

### **CMG-445 Publication Production**

3 cr.

Repeatable for Credit: No

Cross-discipline work teams experience integration of creative, technical and managerial skills to design, plan, schedule, produce and distribute print and digital versions of a publication.

*Prerequisite: take CMG-355*

### **CMG-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CMG-482 Graphics Workflow Automation**

3 cr.

Repeatable for Credit: No

Emerging trends in graphics workflow automation. Utilization of Job Definition Format (JDF) files to streamline digital workflow and integrate with production and management information systems. Asset management integration, file preflighting and repair, scripting, Web-to-Print integration, and workflow customization.

*Prerequisites: take CMG-380*

### **CMG-495 Cross-Media Seminar**

3 cr.

#### **Global Perspective**

Repeatable for Credit: Yes

Overview of the graphic communications industry; its size, market segments, profitability and organization. Research and analysis of company annual reports. Strategic planning, management and leadership, industry trends and forecasts, trade organizations, news and other information sources. Impact of technology, global issues, and competing information distribution channels.

*Must be Senior level or higher*

### **CMG-498 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

## **Cognitive Neuroscience**

### **CNS-200 Introduction to Cognitive Neuroscience**

3 cr.

**Natural Science, Social and Behavioral Sciences - Psychology**



Repeatable for Credit: No

Cognitive and neural processes that support higher mental functions and methods by which inferences about the brain bases of cognition are made.

### **CNS-201 Introduction to Cognitive Neuroscience Lab**

1 cr.

**Natural Science with Lab, Natural Sciences - Life Sciences**

Repeatable for Credit: No

Cognitive neuroscience experimental techniques including behavioral and electrophysiological methods of research.

Measurement, analysis and presentation of laboratory data on cognitive neuroscience, such as neuronal properties, sensation, memory, perception, learning and attention.

*Corequisite: CNS-200*

### **CNS-401 Prime Time Cognitive Neuroscience**

2 cr.

Repeatable for Credit: No

Public perceptions of cognitive neuroscience, using television programs as a lens. Examination of the disconnect between public perceptions and scientific reality.

### **CNS-401 Special Topic: Psychology, Neuroscience, and Evolution**

3 cr.

Repeatable for Credit: No

Examines the application of evolutionary theory of the study of human behavior and the brain. Focus on the evolutionary bases of important phenomena such as sensation and perception, consciousness, emotions, personality, and a variety of social behaviors.

Emphasis on thinking critically and writing about research.

*Prerequisite: take PSYC-110*

### **CNS-480 Cognitive Neuroscience Research Experience**

1 cr.

Repeatable for Credit: Yes

Design, execution, analysis, and reporting of faculty-supervised, cognitive neuroscience-related research.

Instructor's Consent Required

*Prerequisites: take CNS-200, CNS-201, STAT 130, and PSYC-391*

### **CNS-481 Computational Cognitive Neuroscience**

4 cr.

Repeatable for Credit: No

Basic principles of computational cognitive neuroscience. Simulating cognition using biologically based networks of neuron-like units (neural networks).

*Prerequisites: MATH-120, STAT 130, CNS-200 and CNS-201*

### **CNS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

## **Cognitive Science**

### **COGS-101 Cognitive Science I**

4 cr.

Repeatable for Credit: No

Multidisciplinary approaches to cognitive science from the fields of psychology, computer science philosophy, neuroscience, and anthropology. Laboratory-based research methods.

*Prerequisite: Take PSYC-110*

### **COGS-202 Cognitive Science 2**

4 cr.

Repeatable for Credit: No

Cognitive science research methodologies and problem-based laboratory exercises related to major cognitive science concepts.

*Prerequisite: Take COGS-101*

### **COGS-390 Cognitive Science Research Studio 1**

2 cr.

Repeatable for Credit: No

Cognitive Science research skills related to conducting a directed research project: literature reviews, meta-analysis, empirical research design, theory development, and testing of research applications.

*Prerequisites: take PSYC-290 and COGS 202*

## **COGS-490 COGS Research Studio 2**

2 cr.

Repeatable for Credit: No

Advanced cognitive Science research skills related to conducting and original research project: literature reviews, meta-analysis, empirical research design, theory development, creation and testing of original applications.

*Prerequisite: take COGS-390*

## **College of Management**

### **COM-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **COM-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department Consent

### **COM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department Consent

### **COM-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.  
Department Consent

## **Computer Science**

### **CS-141 Introduction to Programming**

3 cr.

#### **Computer Science**

Repeatable for Credit: No

Solving problems using computer programming. Input/output, user interface, objects, events, flow of control, functions, arrays.

### **CS-144 Computer Science I**

4 cr.

#### **Computer Science**

Repeatable for Credit: No

Problem solving using a high-level programming language. Graphical user interfaces, object-oriented programming, event handling, documentation, flow of control, testing, input/output, arrays.

### **CS-145 Computer Science II**

4 cr.

Repeatable for Credit: No

Basic concepts in computer systems including computer structure, assembly languages, addressing techniques, program segmentation and linkage. Problem solving using a high-level programming language. Procedural programming concepts, string processing, searching and sorting algorithms, pointers, dynamic memory allocation, memory management, linear data structures, recursive structures, object-oriented programming, and debugging.

*Prerequisite: take CS-144*

### **CS-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **CS-244 Data Structures**

4 cr.

Repeatable for Credit: No

Concepts and foundations of data structures and algorithms. Introduction to analysis of algorithms and linear structures, vectors, linked lists, stacks, queues and priority queues. Non-linear data structures such as trees, tree traversals, binary trees, binary search trees and graphs. Advanced sorting and searching techniques. Hashing, heaps.

*Prerequisite: take CS-145*

## **CS-245 Introduction to Computer Organization**

3 cr.

Repeatable for Credit: No

Basic concepts in computer systems including computer structure, machine language, assembly languages, addressing techniques, macros, file I/O, program segmentation and linkage.

*Prerequisite: take CS-145*

## **CS-248 Web and Internet Programming**

3 cr.

Repeatable for Credit: No

Design and implementation of web and internet software systems using current programming languages, scripting languages, and interface standards. Network programming and client/server applications. Support for database access via web programs.

*Prerequisite: Take CS-141 or CS-144*

## **CS-290 Professional Seminar**

1 cr.

Repeatable for Credit: No

Preparation for the computer science profession. Assess knowledge base, identify areas of strengths and weaknesses, define plan for further development. Build a professional portfolio and resume, and review interviewing skills. Explore career paths, company research, negotiations and weighing job offers. Opportunities for attendance at industry presentations and company visits.

*Prerequisite: take CS-244 or CS-248*

## **CS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CS-326 Programming in Game Engines**

3 cr.

Repeatable for Credit: No

Introduction to programming in game engines with focus on programming game objects, physics, programmable effect systems and user interface components to create interactive programs.

*Prerequisite: take CS-244*

### **CS-326 Programming Interaction in 3D Game Environments**

3 cr.

Repeatable for Credit: No

Introduction to a 3D game programming environment with focus on programming interaction of game objects, physics, programmable effect systems and Heads-Up-Display (HUD).

*Prerequisite: take CS-244*

### **CS-342 Survey of Programming Languages**

3 cr.

Repeatable for Credit: No

Programming languages and language design. Comparative study of three modern high level languages and their application strengths for systems programming, embedded computer systems and artificial intelligence.

*Prerequisites: take CS-244 and CS-245*

### **CS-343 Mathematical Foundations of Computer Graphics**

3 cr.

Repeatable for Credit: No

Fundamental hardware, software, mathematics, data structures and algorithms for computer graphics.

*Prerequisites: take CS-244 and MATH 275, and take either MATH-158 or MATH-154 or PHYS-281*

### **CS-345 Image Processing**

3 cr.

Repeatable for Credit: No

Theory and applications of digital image processing. Mathematical foundations and algorithms for enhancement, restoration,

compression, segmentation and reconstruction from projections.  
*Prerequisites: take MATH-255, MATH-275, CS-244, and STAT-332*

### **CS-346 Simulation Modeling and Analysis**

3 cr.

Repeatable for Credit: No

Simulation as a problem-solving technique; models, analysis and languages for simulation; data collection; random variate generation; verification and validation; output analysis; optimization of systems.

*Prerequisites: take CS-244 and STAT-332*

### **CS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CS-354 Algorithms and Artificial Intelligence**

3 cr.

Repeatable for Credit: No

Introduction to the design and analysis of computer algorithms. Concepts of artificial intelligence and machine learning to enhance analytical and problem solving skills.

*Prerequisite: take CS-244*

### **CS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **CS-441 Computer Architecture**

3 cr.

Repeatable for Credit: No

Fundamentals in modern computer technology, focusing on hardware. Design, operation, and interconnections of the major

computer system components consisting of the CPU, memory, and I/O modules.

*Prerequisite: take CS-244*

### **CS-442 Systems Programming**

3 cr.

Repeatable for Credit: No

Design, organization and case studies of major systems software: assemblers, loaders, linkers, macro processors, compilers, and operating systems. Relationship between machine architecture and system software.

*Prerequisite: take CS-441*

### **CS-443 Database Systems Manipulation and Design**

3 cr.

Repeatable for Credit: No

Conceptual and logical organization of data, data models, data manipulation and data definition languages, and design of databases. Distributed database systems; integrity, constraints, concurrency, security, and query optimization.

*Prerequisite: take CS-244*

### **CS-448 Software Engineering**

3 cr.

Repeatable for Credit: No

Software development lifecycle, programming languages and environments, program testing, documentation, software management and organization. Class software development project.

*Prerequisite: take CS-244*

### **CS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **CS-458 Advanced Software Engineering**

3 cr.



Repeatable for Credit: No

Semester-long software engineering project based on an applied real life problem. Advanced models of modern software development process. An in-depth exposure to the latest technologies and trends in software engineering: architecture, process, frameworks, methodologies, and tools. Software metrics, quality, management, reliability, testing, integration, verification, validation, deployment, and maintenance.

*Prerequisite: take CS-448*

## **CS-480 Introduction to Computer Security**

3 cr.

Repeatable for Credit: No

Computer security problems and challenges, relationship between policy and security, cryptography, implementation of requirements imposed by policies, use of standards to ensure that the system will meet its goals, system vulnerabilities analysis and detection, intrusion detection, application of desired policy and procedures to support the policy.

*Prerequisite: take CS-245*

## **CS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Counseling**

### **COUN-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **COUN-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **COUN-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **COUN-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **COUN-400 Workshop in Counseling**

1-3 cr.

Repeatable for Credit: Yes

Current specialized topics studied through experiential activities.

### **COUN-405 Introduction to Basic Counseling Skills**

3 cr.

Repeatable for Credit: No

Develop basic helping skills including active listening; problem solving, goal setting, and decision-making; conflict resolution; information giving; assertion skills; and making referrals. Applicable when basic counseling is an appropriate helping response and also in any interpersonal relationship, including people with disability and ethnic diversity issues.

### **COUN-406 Peer Supervisory Experience**

1 cr.

Repeatable for Credit: Yes

Experience in observation and feedback to peers undergoing counseling skill training.

Instructor's Consent Required

### **COUN-447 Assessment and Treatment of Eating Disorders**

2 cr.

Repeatable for Credit: No

Description and diagnostic criteria for anorexia nervosa, bulimia nervosa, obesity, and compulsive overeating. Psychological, sociological, and familial influences on the development of the disorders. Assessment instruments, approaches, and treatment considerations.

### **COUN-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **COUN-494 Counseling Older Persons**

2-3 cr.

Repeatable for Credit: No

Training service providers in counseling skills and gerontology through discussion, observation and supervised counseling experiences.

### **COUN-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Design**

### **DES-114 Interior Design Communication Tools**

3 cr.

Repeatable for Credit: No

Introductory study of the design process, software and communication tools used within the interior design industry.

## **DES-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **DES-150 Introduction to Sustainable Design and Development**

3 cr.

**Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Examination of theory and practice of sustainable development and the influential role of design.

## **DES-176 Introduction to Digital Narrative**

3 cr.

Repeatable for Credit: No

Visual storytelling and time-based foundations (4D) for animation, digital cinema, comics, game design, transmedia design and other time-based forms. Emphasis on ideation through writing, storyboarding and concept illustration. Introduction to the field of entertainment design.

## **DES-200 Design Concepts and Problems**

3 cr.

Repeatable for Credit: No

Comprehensive understanding of the processes, techniques, and concepts used by designers to arrive at innovative and successful design solutions.

*Prerequisites: take ART-101 and ART 103, each with a grade of C or better*

## **DES-205 Design Drawing and Concept Visualization**

3 cr.

Repeatable for Credit: No

Comprehensive education and training in developing, visualizing, and communicating design ideas through drawing.

*Prerequisites: take ART-200 with a grade of C or better*

### **DES-210 Letter Form Design**

3 cr.

Repeatable for Credit: No

Design of letterforms, figures, and visual symbols; history and development of type; calligraphy; page composition for various formats and audiences.

*Prerequisites: take ART-100 and ART-101, each with a grade of C or better*

### **DES-214 Interior Design Practice, Materials and Finishes**

3 cr.

Repeatable for Credit: No

Introductory study of interior design professional practice, contemporary interior design issues, materials and finishes used within the built environment.

### **DES-220 Introduction To 2D Digital Imaging**

3 cr.

Repeatable for Credit: No

Creative use of digital imaging technology in the visual arts; exploring the development of 2D imagery for both printed and electronic formats incorporating type, vector and raster graphics using layout and composition software.

*Prerequisite: Take ART-101 with a grade of C or better*

### **DES-225 Pixel and Vector Art**

3 cr.

Repeatable for Credit: No

Investigation into ways digital 2D art, through using both pixel and vector applications, can be incorporated into the game medium through concept art and in-game art assets.

*Prerequisites: take DES 220 with a grade of C or better*

### **DES-231 Industrial Design 1: Product Form and Visualization**

3 cr.

Repeatable for Credit: No

Introduction to Industrial Design, with an emphasis on aesthetics, visualization, and the process of designing new products.

*Prerequisites: take ART-200 Prerequisite or Corequisite: take DES-205, each with a grade of C or better*

### **DES-232 Industrial Design 2: Ergonomics**

3 cr.

Repeatable for Credit: No

Study and application of human factors to the design of products. Understand the human body and its limitations to create a product that is comfortable, safe, and easy to use.

*Prerequisite: take DES 205 and DES 231 each with a C or better*

### **DES-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **DES-256 Art Workshop**

1-3 cr.

Repeatable for Credit: Yes

Selected art concepts, processes and media will vary to serve special student populations. Credit determined by individual contract.

### **DES-297 Design Field Experience/Experiential Learning**

1-3 cr.

Repeatable for Credit: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department Consent

### **DES-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **DES-303 Interior Design Studio 1**

3 cr.

Repeatable for Credit: No

Experiential study of the fundamental principles and elements of interior design and their application to a range of residential design projects. Projects emphasize residential space planning based on functional requirements, application of various elements of design, and design communication methods.

*Prerequisites: take ART 103 (with a grade of C or better) or BURTL-229; and take DES-205 (with a grade of C or better), AEC-131, and AEC-233*

## **DES-304 Interior Design Studio 2**

3 cr.

Repeatable for Credit: No

Experiential study of the principles and elements of interior design as applied to a range of projects and end-user populations. Studio design projects emphasize project development, end-user needs, codes, varied building typologies, and design communication methods.

*Prerequisites: take RD-205 or DES-303 with a grade of C or better*

## **DES-304 Interior Design Studio 2**

3 cr.

Repeatable for Credit: No

Experiential study of the principles and elements of interior design as applied to a range of projects and end-user populations. Studio design projects emphasize project development, end-user needs, codes, varied building typologies, and design communication methods.

*Prerequisites: take RD-205 or DES-303 with a grade of C or better*

## **DES-308 Lighting Design in the Built Environment**

3 cr.

Repeatable for Credit: No

Exploration and application of professional lighting design practice within the built environment including psychological and physiological aspects of artificial and natural light, effects of color, directional effects, materials, design process, aesthetics, codes, energy conservation, and sustainability.

*Prerequisite: take DES-303 with a grade of C or better*

## **DES-310 Graphic Design I**

3 cr.

Repeatable for Credit: No

Exploration of the formal qualities of creating effective and informative design. Foundational design elements including line,

shape, form and texture; compositional principle concepts of balance, contrast, grid structures and hierarchy.

*Prerequisites: take ART-101 or DES-210, each with a grade of C or better*

### **DES-314 Interior Design Contracts and Codes**

3 cr.

Repeatable for Credit: No

Study of interior design professional practice, industry regulations and product specifications.

*Prerequisites: Take DES-214*

### **DES-320 Furniture Design**

3 cr.

Repeatable for Credit: No

Design and construction of contemporary furniture.

*Prerequisites: take DES-231 or DES-232 or DES-303 with a grade of C or better*

### **DES-321 Digital Imagery Studio**

3 cr.

Repeatable for Credit: Yes

A studio workshop experience in digital painting, photo illustration and image compositing using digital tools. Advanced topics and projects rotate.

*Prerequisites: take ART-200, DES-205 & DES-220, each with a grade of C or better*

### **DES-325 Interactive Design I: Introduction to Web Design**

3 cr.

Repeatable for Credit: No

Design and development of web-based human-computer interfaces.

*Prerequisites: take DES-220 with a grade of C or better*

### **DES-331 Industrial Design 3: Product Interface Design**

3 cr.

Repeatable for Credit: No

Designing products and their interfaces to make them understandable, easy to use, safe, and appealing.

*Prerequisites: take DES-232 with a grade of C or better, and MFGT-110*



### **DES-332 Industrial Design 4: Design for Manufacture**

3 cr.

Repeatable for Credit: No

Overview of common materials and manufacturing techniques and application to the design of mass-produced products.

*Prerequisites: take DES 331 with a C or better and take MFGT 110*

### **DES-333 Professional Practice In Industrial Design**

1 cr.

Repeatable for Credit: Yes

Overview of the role of the professional industrial designer.

*Prerequisites: take DES-231 and DES-232, each with a grade of C or better*

### **DES-345 Product Form Design**

3 cr.

Repeatable for Credit: No

Exploration of product forms through drawing and model-building techniques.

### **DES-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **DES-350 3D Game Art and Engines**

3 cr.

Repeatable for Credit: No

Investigation into ways 3D modeling, animation, and texturing can be incorporated into interactive experiences using industry standard 3D game engines and virtual reality technology.

Prerequisite: take DES 372

## **DES-360 Graphic Design II**

3 cr.

Repeatable for Credit: No

Social responsibility, business and ethical factors affecting visual communication are investigated while deepening sensitivity and experience in graphic design. Deeper, broader understanding of how to create meaning and utilize problem-solving methodologies to develop work that is compelling, informative, and meaningful.

*Prerequisites: take DES-310 and DES-220, each with a grade of C or better*

## **DES-370 Interactive Design II: Principles and Methods**

3 cr.

Repeatable for Credit: No

Application of principles and methods related to research, design, development, and evaluation of human-computer interfaces.

*Prerequisite: take DES-325 with a grade of C or better*

## **DES-372 3D Modeling and Animation I**

3 cr.

Repeatable for Credit: No

Introduction to 3D digital modeling, animation, texturing, lighting, and rendering techniques. Using digital design elements and visual aesthetics, students create 3D digital imagery and animations.

*Prerequisites: take ART-103 & DES-220, each with a grade of C or better*

## **DES-373 3D Modeling & Animation III**

3 cr.

Repeatable for Credit: Yes

Advanced studio course in which 3D digital expertise is developed through directed and collaborative research. Students specialize in one of the following 3D digital fields: modeling, animation, texturing, lighting and rendering, or visual effects.

Repeatable: topics and projects rotate each semester.

*Prerequisite: take DES-374 with a grade of C or better*

## **DES-374 3D Modeling and Animation II**

3 cr.

Repeatable for Credit: No

Intermediate focus on 3D digital modeling, animation, texturing, lighting, and rendering techniques. Create robust 3D digital imagery and animations using digital design elements and visual aesthetics.

*Prerequisites: take DES-176 and DES-372, each with a grade of C or better*

### **DES-375 Digital Cinema Studio**

3 cr.

Repeatable for Credit: Yes

Techniques, topics and projects for digital cinema. Emphasis on creative direction, aesthetics, content and narrative development. Advanced students work individually and in teams to produce and critically examine self-directed projects. Advanced topics and projects rotate each semester.

*Prerequisites: take DES-176, DES-220 and ART-100, each with a grade of C or better*

### **DES-378 Animation Studio**

3 cr.

Repeatable for Credit: Yes

Animation techniques, topics and projects. Course provides an introduction to 2D and s-motion animation techniques. Advanced students work individually and in teams to produce and critically examine self-directed projects. Specific topics and projects rotate each semester.

*Prerequisites: take DES-176 and DES-220, each with a grade of C or better*

### **DES-379 Comics & Sequential Art Studio**

3 cr.

Repeatable for Credit: Yes

Techniques, topics and projects. Introduction to the art and craft of combining words and illustrated pictures to create narrative works. Advanced students work individually and in teams to produce and critically examine self-directed projects. Advanced topics and projects rotate each semester.

*Prerequisites: take DES-176, DES-220 and ART-100, each with a grade of C or better*

### **DES-380 Signage and Exhibition Design**

3 cr.

Repeatable for Credit: Yes

Organization and design of environmental graphics through the production of signage, display, and exhibition support systems. A special course fee applies.

*Prerequisites: take DES-205 and DES-360, each with a grade of C or better*

### **DES-382 Information Design**

3 cr.

Repeatable for Credit: No

Envisioning information through the design and production of charts, diagrams, maps, and other hierarchical graphics. A special course fee applies.

*Prerequisite: take DES-360 with a grade of C or better*

### **DES-384 Advertising Design**

3 cr.

Repeatable for Credit: No

Graphic design principles and creative concepts as applied to advertising art. A special course fee applies.

Prerequisites: take DES-205 and DES-360, each with a grade of C or better

### **DES-385 Interactive Digital Design III: Advanced Concepts**

3 cr.

Repeatable for Credit: No

Advanced design and development of human-computer interfaces.

*Prerequisite: take DES-370 with a grade of C or better*

### **DES-386 Publication Design**

3 cr.

Repeatable for Credit: No

Graphic design principles as applied to the combination and coordination of art and typography with text. A special course fee applies.

*Prerequisite: take DES-360 with a grade of C or better*

### **DES-388 Typographic Design**

3 cr.

Repeatable for Credit: No

Design of grid-based, hierarchical and expressive typographic structures; analysis of historical and theoretical precedents. A special course fee applies.

*Prerequisite: take DES-360 with a grade of C or better*

### **DES-389 Typography in Motion**

3 cr.

Repeatable for Credit: No

Introduction into dynamic, time-based typography covering technology and skills involved in creating kinetic and emotive typography with various media.

*Prerequisites: take DES-325 and DES-360, each with a grade of C or better*

### **DES-390 Entertainment Design Portfolio and Professional Practices Seminar**

1 cr.

Repeatable for Credit: No

Professional practices and portfolio seminar for Entertainment Design students, all concentrations. Develop of promotional materials and discuss related business strategies and legal issues.

*Prerequisites: Take DES-176 and DES-220, and take either DES-375 or DES-378 or DES-379, each with a grade of C or better*

### **DES-397 Design Field Experience/Experiential Learning**

1-3 cr.

Repeatable for Credit: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department Consent

### **DES-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **DES-405 Advanced Design Drawing**

3 cr.

Repeatable for Credit: No

In-depth study of illustration and presentation styles within various design contexts. Development of drawing skills in traditional and digital media, emphasizing perspective, form, and texture. Emphasis on rapid freehand, conceptual drawing as a means to imagine and develop design concepts.

### **DES-410 Product and Packaging Graphics**

3 cr.

Repeatable for Credit: No

Design and application of graphics to products, packages, and related display systems.

*Prerequisite: take DES-360 with a grade of C or better*

### **DES-414 Interior Design Construction Documentation**

3 cr.

Repeatable for Credit: No

Advanced interior design specification and construction documentation, incorporating elements of current professional practice.

*Prerequisite: take DES-314 with a grade of C or better and ENGGR 134*

### **DES-415 Interior Design Studio 3**

3 cr.

Repeatable for Credit: No

Advanced experiential study of the principles and elements of interior design and their application to a range of commercial design projects. Studio design projects emphasize conceptual development, space planning, building code and accessibility compliance.

*Prerequisite: take DES-304 with a grade of C or better*

### **DES-416 Interior Design Senior Studio**

4 cr.

Repeatable for Credit: No

Exploration of advanced interior design topics, including sustainability, through an extensive project(s) to include all phases of current interior design professional practice and incorporation into students portfolio.

*Prerequisites: take DES-308 and DES-414, each with a grade of C or better*

### **DES-431 ID5: Industrial Design Senior Studio I**

3 cr.

Repeatable for Credit: Yes

Exploration of advanced industrial design topics through extensive projects with consideration given to contextual and environmental issues. topics and projects rotate each semester. Department consent

*Prerequisite: take DES-331 and DES-332 with a grade of C or better*

### **DES-432 ID6: Industrial Design Senior Studio II**

3 cr.

Repeatable for Credit: No

Execution of advanced industrial design projects through all phases of current industrial design process.

*Prerequisites: take DES-331 and DES-332 , each with a grade of C or better*

### **DES-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **DES-451 Interior Design Practicum**

3 cr.

Repeatable for Credit: No

Work experience with an interior designer or in design-related field arranged with interior design work experience coordinator.

Department Consent

*Prerequisite: take DES-303 with a grade of C or better*

### **DES-456 Advanced Art Workshop**

1-3 cr.

Repeatable for Credit: Yes

Selected art concepts, processes and media will vary to serve special student populations. For students familiar with workshop approach or advanced in art program. Credit determined by individual contract.

### **DES-480 Senior Project - Graphic Design**

4 cr.

Repeatable for Credit: No

Exploration of an advanced graphic design topic through an extensive project: research, production specification, and development of a presentation system.

Instructor's Consent Required

*Prerequisites: take DES-360, and take either DES 380 or DES-410, all with a grade of C or better*

### **DES-490 Senior Project: Entertainment Design**

3-4 cr.

Repeatable for Credit: Yes

Advanced entertainment design topic explored through the completion of professional level projects from concept to published media. Capstone project for the BFA in Entertainment Design. Repeatable. Specific topics and projects rotate each semester.

Students are required to take a minimum of two consecutive semesters.

Instructor's Consent Required

### **DES-497 Design Field Experience/Experiential Learning**

1-3 cr.

Repeatable for Credit: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department Consent

### **DES-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Early Childhood Education**

### **ECE-100 Introduction to Early Childhood Programs**

2 cr.

Repeatable for Credit: No

Introduce early childhood profession. Early childhood programs for children birth through age eight; developmentally appropriate practice; current issues in early childhood; professionalism; employability skills and attitudes; and career exploration. Decision making and appropriate planning of students' early childhood program plan.

Prerequisite: Early Childhood Education majors only

### **ECE-105 Infant/Toddler Education**

3 cr.

Repeatable for Credit: No

Examine developmentally appropriate practice for educating infants and toddlers. Environment; instructional practices for individual and small group; lesson plans including assessment strategies, instructional technology techniques, and materials.

*Take concurrently with HDF5-124*



### **ECE-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.  
Department Consent

### **ECE-200 Expressive Curriculum for the Young Child**

3 cr.

Repeatable for Credit: No

Curriculum, methods and materials related to music, art and creative movement activities for the young child.

### **ECE-205 Preschool/Kindergarten Education**

3 cr.

Repeatable for Credit: No

Developmentally appropriate practice in preschool/kindergarten curriculum. Environment; instructional practices for individual, small and large group instruction; lesson plans including assessment strategies, instruction technology techniques, and materials.

### **ECE-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.  
Instructor's Consent Required

### **ECE-264 Child Guidance in PreSchool - Kindergarten**

2 cr.

Repeatable for Credit: No

Essential elements in guiding children in early childhood classrooms. Positive guidance strategies, introduction to early childhood classroom management, effects of guidance on children's social and emotional development; methods in documenting children's behavior, progress, development.

*Completion of Tier 1: HDFS-124 and ECE-105*

### **ECE-305 Primary Education**

3 cr.

Repeatable for Credit: No

Focus on developmentally appropriate teaching practices in primary classrooms (grades 1-3). Program models; learning environments; local, state, and national standards; assessment techniques; instructional approaches and lesson planning for primary students.

*Prerequisite: Completion of Tier 2 and Benchmark I, and concurrent enrollment in ECE-313*

### **ECE-313 Language Arts and Emergent Reading: Birth-Kindergarten**

3 cr.

Repeatable for Credit: No

Methods and materials for planning, implementing, and evaluating language arts with children Birth-Kindergarten. Emphasis is on developing emergent literacy skills and language arts.

*Prerequisite: Completion of Tier 2 and Benchmark I, and concurrent enrollment in ECE-305*

### **ECE-411 Early Childhood Curriculum: Mathematics**

3 cr.

Repeatable for Credit: No

Mathematics curriculum planning for early childhood. Selection, organization, presentation, and evaluation of appropriate curricula.

*Prerequisites: take ECE-421, ECE-435, and ECE-480*

### **ECE-414 Early Childhood Clinical Experience: Integrated Curriculum**

2 cr.

Repeatable for Credit: No

Development of competencies in planning, teaching, and evaluating the integrated curriculum for the early childhood period.

Participation in an early childhood setting required.

Prerequisite: Benchmark I completion

### **ECE-415 Early Childhood Curriculum: Science/Social Studies**

4 cr.

Repeatable for Credit: No

Methods and materials for assessing, planning, implementing, and evaluating early childhood social studies and science curriculum.

*Prerequisites: take ECE-421, ECE-435, and ECE-480*

### **ECE-421 Administration Of Early Childhood Programs**

2 cr.

Repeatable for Credit: No

A study of program organization, program design, staffing, licensing, certification, equipment and facilities for operating early childhood education programs in a safe and healthy environment.

*Completion of Tier 3: ECE-313 and ECE-305*

### **ECE-426 Classroom Management in the Primary Classroom**

2 cr.

Repeatable for Credit: No

Advanced study of managing early childhood classrooms. Management of the physical environment, instructional context, including large and small groups, and social context; building a classroom community; encouraging collaborative learning; assessing management of early childhood classrooms; and analysis of classroom management programs. Microclinical in early childhood classrooms required.

*Prerequisites: take ECE-421, ECE-435, and ECE-480*

### **ECE-427 Child Abuse and Neglect**

2 cr.

Repeatable for Credit: No

Systemic nature, forms and indicators, and prevention of abuse/neglect. Factors contributing to, and intervention skills in, coping with the effects of abuse/neglect on children and families at risk.

### **ECE-433 Language Arts/Reading--Early Childhood Education**

3 cr.

Repeatable for Credit: No

Current philosophies, methodology and materials for teaching reading: readiness activities and beginning reading in early childhood.

### **ECE-435 Children, Families, Schools and Communities**

2 cr.

Repeatable for Credit: No

Building family, school, and community partnerships to support the whole child. Demographics and sociological trends of

modern families. Theories and processes used to establish positive and sustaining home-school-community relationships.  
*Completion of Tier 3: ECE-313 and ECE-305*

### **ECE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ECE-464 Special Topics in Early Childhood Curriculum**

1-3 cr.

Repeatable for Credit: Yes

Philosophy and methodology of early childhood education: problems confronting teachers.

### **ECE-480 Pre-Student Teaching: Infant-Preschool**

4-8 cr.

Repeatable for Credit: No

Full-day, pre-student teaching placement for eight weeks. Age group includes infants or toddlers or preschoolers. Placement will include involvement with young children and parents. Teacher candidates will be supervised by faculty in the early childhood area. Placement will follow the school calendar.

*Completion of Tier 3: ECE-313 and ECE-305*

### **ECE-480A Student Teaching in Preschool Programs**

4 cr.

Repeatable for Credit: No

Directed teaching and community experience in selected early childhood centers.

Department Consent

### **ECE-488 Intern Teaching**

8-16 cr.

Repeatable for Credit: No

An alternate method of obtaining student teaching experience. Teacher interns receive license to teach and salaried appointments

in cooperating school systems for one full semester.  
Department Consent

### **ECE-492 Student Teaching in Prekindergarten**

8 cr.

Repeatable for Credit: No

Full-day student teaching experience at the prekindergarten level in a preschool setting, together with a weekly one-hour student teaching seminar session. The student teaching experience follows the calendar of the preschool.

Department Consent

*Prerequisites: Must be an Early Childhood Education major; take HDFS-335 and ECE-433*

### **ECE-493 Student Teaching: Kindergarten**

4-8 cr.

Repeatable for Credit: No

Full-day student teaching at the kindergarten level in a public school setting. Experience will follow the public school district calendar.

Department Consent

Prerequisite: Professional Program Admission

### **ECE-494 Student Teaching: Primary**

4-8 cr.

Repeatable for Credit: No

Full-day student teaching at the primary level (grades 1-3) in a public school setting. Primary student teaching experience follows the public school district calendar.

Department Consent

Prerequisite: Professional Program Admission

### **ECE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Economics**

## **ECON-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **ECON-201 General Economics**

3 cr.

### **Global Perspective, Social and Behavioral Sciences - Economics**

Repeatable for Credit: No

Introduction to basic elements of economics; analysis of institutions, issues and policy; theories of price, national income and employment. Not open to students taking ECON-210 and ECON-215. Not open to students who took ECON-210 or ECON-215

## **ECON-210 Principles of Economics I**

3 cr.

### **Global Perspective, Social and Behavioral Sciences - Economics**

Repeatable for Credit: No

Tools of basic economic analysis including scarcity, cost, and demand and supply; macroeconomic issues such as economic growth, inflation, and unemployment; alternative macroeconomic theories; and fiscal and monetary policies. Not recommended for students who took ECON-201

## **ECON-215 Principles of Economics II**

3 cr.

### **Global Perspective, Social and Behavioral Sciences - Economics**

Repeatable for Credit: No

Theory of individual economic behavior; price determination; market structures; labor, capital and natural resource markets; international economics; and current microeconomic ics.

*Prerequisite: take ECON-210*

## **ECON-220 Economics of Crime**

3 cr.

Repeatable for Credit: No

Exploration of the contributions of economics to the understanding of crime and criminal justice. Use of market as a tool for analysis of crime and criminal behavior; economic burdens of criminality, evaluation of the costs imposed by criminal acts; efficiency in the allocation of criminal justice resources.

### **ECON-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ECON-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ECON-310 Economics of Conflict**

3 cr.

Repeatable for Credit: No

Economic analysis of conflict: How basic tools of economics are used to better understand the causes of conflict, how collective action and political constraints moderate conflict, the effect of conflict on political institutions and economic development, and how political risk affects international business investment decisions.

### **ECON-335 Personal Investing**

3 cr.

Repeatable for Credit: No

Terminology, evaluation, selection and risk analysis of all types of investment vehicles: stocks, bonds, mutual funds, and enhanced traded funds.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ECON-350 Environmental and Natural Resource Economics**

3 cr.

Repeatable for Credit: No

Principles underlying use of natural resources including demand and supply; efficiency; cost effectiveness and benefit-cost analysis; sustainability; optimal pricing; and management of renewable and non-renewable resources. Principles are applied to the examination of pollution control, preservation versus development, recycling, and other environmental and natural resource issues and policies.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-360 Strategic Decision Making and Game Theory**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Strategic behavior and game theoretic approaches for problem solving and social analysis with particular application to economics, politics, and sociology as well as business and industry applications; mechanisms for sustainable conflict resolution, ethical and socially responsible decision making, and optimal individual and group choice.

### **ECON-380 Business and Economic Forecasting**

3 cr.

Repeatable for Credit: No

Quantitative methods used in economics and business forecasting. topics include descriptive statistics, hypothesis testing, correlation, regression analysis and forecasting. Real business applications of these techniques are emphasized.

*Prerequisites: take ECON-201 or ECON-215; and take STAT 130 or STAT-320*

### **ECON-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ECON-410 Microeconomics**

3 cr.

Repeatable for Credit: No



Value and distribution theory; analysis of demand- firm, industry and utility; pricing of production factors.

*Prerequisite: take ECON-215*

### **ECON-415 Macroeconomics**

3 cr.

Repeatable for Credit: No

Determination of aggregate income, employment, growth rates and price levels; monetary and fiscal policies necessary for full employment.

*Prerequisite: take ECON-215*

### **ECON-420 Labor Economics**

3 cr.

Repeatable for Credit: No

Basic labor theory; history of organized labor in western industrial societies; collective bargaining as viewed by labor, management, government and public; institutions involved in modern labor relations.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-421 Collective Bargaining & Labor Relations**

2 cr.

Repeatable for Credit: No

Introduction to collective bargaining in the U.S.; formation, substance and administration of a labor agreement, current labor law, role of National Labor Relations Board.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-425 Economic Development**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Analysis of the economies of less developed countries in an institutional and international framework to understand the social and economic realities of people living in these regions. Evaluation of economic policies and their impact on development.

*Prerequisite: take ECON 215*

### **ECON-435 Money, Banking, Financial Markets**

3 cr.

Repeatable for Credit: No

Money and bank credit, modern monetary theories, monetary policy.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-445 Public Finance**

3 cr.

Repeatable for Credit: No

Public finance at all governmental levels; taxation, expenditures, debt management and fiscal policy.

*Prerequisites: take either ECON-201 or ECON-210*

### **ECON-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ECON-480 International Economics**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Survey of current issues such as changing world financial situations, international agreements and organizations, and other topics related to trade models, tariffs, exchange rates and balance of payments.

*Prerequisite: take ECON-210*

### **ECON-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Education**

### **EDUC-10 Praxis I: Pre-Professional Skills Test Writing Preparation**

1 cr.

Repeatable for Credit: Yes

Designed to prepare education students for the PPST:Writing test. Structured writing format and learning strategies to develop an organized and authoritative approach to professional writing.

### **EDUC-11 Praxis I: Reading Comprehension**

1 cr.

Repeatable for Credit: Yes

Utilization of a structured reading comprehension format and metacognitive learning strategies to improve the reading comprehension skills needed by education students. Study of specific reading comprehension elements assessed in the standardized test that all pre-service teachers are expected to pass.

### **EDUC-170 Video Games and Simulations in Educational Environments**

2 cr.

Repeatable for Credit: No

Philosophical, theoretical, design and implementation issues relative to incorporating games and simulations within educational and training environments. Emphasis will be placed on education environments.

### **EDUC-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **EDUC-210 Impacts of Technology on Learning**

3 cr.

#### **Contemporary Issues**

Repeatable for Credit: No

The impacts of technology on individual learners and society; the role technology plays in both the information and formal education of individuals; contemporary developments and issues related to the use of technology in individual and collective learning scenarios.

## **EDUC-260 Images of Education: Not Another Brick in the Wall**

3 cr.

### **Contemporary Issues**

Repeatable for Credit: No

A multidisciplinary approach to the experience of becoming educated; an opportunity to understand education from a critical reading of historical, philosophical, literary and cinematic explorations about school and schooling.

## **EDUC-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **EDUC-303 Educational Psychology**

3 cr.

Repeatable for Credit: No

Psychological aspects of learning, teaching, and assessment processes within educational contexts. Focus on the principles of learning and cognition, human development, individual and group differences, teaching and assessment processes.

*Must be Sophomore level or higher*

## **EDUC-304 Secondary Curriculum Methods and Assessment**

2 cr.

Repeatable for Credit: No

Discipline-specific curriculum, methods, and assessment procedures for teaching content minors.

Department Consent

*Prerequisite: Benchmark I completion*

## **EDUC-305 Student Teaching**

2-16 cr.

Repeatable for Credit: No

Directed teaching in school setting in subject area consistent with teaching minor or add-on certification. Completion of teacher work sample and portfolio.

Department Consent

*Prerequisite: Benchmark II completion*

### **EDUC-307 Racial and Cultural Perspectives on Applied Human Relations**

3 cr.

#### **Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Major themes on how race and ethnicity shape personal and interpersonal relationships.

### **EDUC-309 Methods, Materials, and Management for Middle Childhood Education**

3 cr.

Repeatable for Credit: No

Focus on developmentally appropriate teaching practices in elementary classrooms (grades 4-6). Program models; learning environments; local, state, and national standards; assessment techniques; instructional approaches, and lesson planning for elementary students.

*Benchmark I Completed*

### **EDUC-310 Middle Childhood: Curriculum and Methods for Teaching Science**

2 cr.

Repeatable for Credit: No

Curriculum, methods, and assessment in middle childhood science teaching for children ages 9 through 11. Knowledge and performances in the areas of planning, classroom management, instruction, and professional responsibilities of reflection, communication are the focus.

*Benchmark I Completed*

### **EDUC-311 Middle Childhood: Curriculum and Methods for Teaching Math**

2 cr.

Repeatable for Credit: No

Methods and materials for assessing, planning, implementing and evaluating mathematics curricula for elementary classrooms (grades 4-6). emphasis is placed on: 1) utilizing process skills, 2) fostering content knowledge in the mathematical areas, 3) assessment, 4) mathematical content instruction, and 5) building positive attitudes for the mathematical classroom. Students will continue to develop skills in the classroom environment while maintaining professional responsibilities for teaching at the elementary level.

*Prerequisite: Benchmark I completion*

### **EDUC-312 Middle Childhood: Curriculum and Methods for Social Studies**

2 cr.

Repeatable for Credit: No

Methods and materials for assessing, planning, implementing and evaluating social studies curricula for elementary classrooms(grades 4-6). emphasis is placed on: 1) utilizing development skills, 2) fostering content knowledge in the content of social studies, 3) assessment, 4) social studies content instruction, and 5) building positive attitudes for the teaching of social studies in the classroom. Develop skills in the classroom environment and maintain professional responsibilities for teaching at the elementary level.

*Prerequisite: Benchmark I completion*

### **EDUC-314 Student Teaching in Elementary Grades**

4-8 cr.

Repeatable for Credit: No

Full-day student teaching at the elementary level (grades 4-6) in a public school setting. Middle childhood student teaching experience follows the public school district calendar.

Department Consent

*Prerequisite: Benchmark II completion*

### **EDUC-320 Racism and Colonialism: Impact on Communities and Education**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Study of systemic hegemony as race, ethnicity, gender, and social class, with a focus on education, language and literature practices, and communities in the United States, Europe, and the societies they colonized. Critical and creative learning experience to evaluate the impact of colonialism, neo-colonialism, and empire on schools and communities.

### **EDUC-326 Foundations of Education**

2 cr.

Repeatable for Credit: No

The study of education and schooling through philosophical, historical, sociological and curricular contexts.

### **EDUC-330 Multiculturalism: Dialogue and Field Experience**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Intensive examination of multiculturalism in the U.S. and global schools and communities: the educational and cultural needs of diverse social groups, discussion of hegemony, cultural, racial, socioeconomic, political, gender, LGBT, and language barriers to

equal educational and economic opportunity. Field experience. Strategies for educational and socioeconomic equity.  
*Prerequisite: Background check required.*

### **EDUC-336 Multiculturalism: Issues & Perspectives**

2 cr.

#### **Racial & Ethnic Studies Category A**

Repeatable for Credit: No

An intensive examination of multiculturalism in U.S. and global schools and communities. Examination of the educational and cultural needs of diverse social and cultural groups. Discussion of hegemony, and cultural, race, socioeconomic, political, gender, LGBT, and language barriers to equal educational and economic opportunity. Strategies for educational and socioeconomic equity.

### **EDUC-349 Methods of Teaching Middle School Math**

3 cr.

Repeatable for Credit: No

Research, issues and problems related to current reform in teaching middle school mathematics, including planning curriculum, assessing student learning, managing instruction, and providing for individual needs.

### **EDUC-376 Cross-Cultural Field Experience**

1 cr.

Repeatable for Credit: No

Supervised field experience in an educational setting with diverse learners to increase awareness, understanding, sensitivity, and appreciation for ethnic and cultural diversity. The acquisition of knowledge, skills, and professional dispositions necessary for educators to facilitate learning for all students are emphasized.

*Benchmark I Completed*

### **EDUC-380 Reading and Language Arts in Elementary Education**

3 cr.

Repeatable for Credit: No

Current philosophies in reading and language arts education, the centrality of language arts to the elementary curriculum and methodologies for the elementary classroom.

*Benchmark I Completed*

### **EDUC-381 Preclinical: Elementary Ed Language Arts and Reading**

1 cr.

Repeatable for Credit: No

Supervised teaching experience in developing the prospective teacher's ability in elementary education language arts and reading skills.

*Benchmark I Completed*

### **EDUC-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **EDUC-400 Workshop: Special Topics In Education**

1-3 cr.

Repeatable for Credit: Yes

Current specialized topics studied through experimental activities.

### **EDUC-401 Global Education Practicum**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Experiential learning opportunity to provide student with in-depth study of one or more of the global education sub-groups: human rights and social justice, human commonality and diversity, population demographics, planet management, global belief systems, economic systems, conflict and control, political systems, science and technology and/or sustainable development.

### **EDUC-402 Global Perspectives for Educators**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Strategies for infusing global perspectives into the classroom for those working in globalized organizations. Methodology, materials and instructional strategies necessary for effective implementation of global education in schools and individual classrooms as well as within global organizations. Topics/issues related to globalization to develop a foundation from which teachers and other leaders in organizations can draw ideas for their specific needs.

### **EDUC-403 Educational Psychology of the Adult Learner**



2 cr.

Repeatable for Credit: No

Psychological principles and theoretical framework guiding the educational process for adult learners. Special focus on planning and evaluating instruction while utilizing active learning to build strong learning communities.

### **EDUC-415 Classroom Management**

2-3 cr.

Repeatable for Credit: No

Technique and theory for motivating PreK-grade 12 age students to manage their own behaviors, including preventive discipline, behavior management, classroom environment, classroom climate, effective communication, conflict resolution, and peer mediation. Must be taken concurrently with variety of field experiences.

*Benchmark I Completed*

### **EDUC-416 Conflict Resolution and Crisis Management for Educators**

2 cr.

Repeatable for Credit: No

Conflict mediation and crisis intervention strategies in school settings.

### **EDUC-423 Service Learning and Civic Engagement**

1-3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Civic engagement and service to others in partnership with community agencies. Interpersonal communications and relationship skills; service to under-served and underrepresented populations; social justice; service provider role in civic engagement.

### **EDUC-440 Poverty in the Schools**

2 cr.

Repeatable for Credit: No

Characteristics and issues facing students from economically disadvantaged backgrounds. Traits of high-performing, high-poverty schools with emphasis on strategies to reduce the achievement gap and build community partnerships. Intended for teachers in the field.

### **EDUC-441 Mobile Learning Instructional Design**

3 cr.

Repeatable for Credit: No

Mobile learning research, trends, instructional design strategies for curriculum integration and professional development.

### **EDUC-442 Teaching Digital Media Literacy in the Content Areas**

2 cr.

Repeatable for Credit: No

Research-based strategies for analyzing, critiquing and engaging with digital text, video, images and diverse multimedia primary sources in the PK-12 classroom to stimulate inquiry, creativity and critical thinking.

### **EDUC-443 Differentiated Instruction**

3 cr.

Repeatable for Credit: No

Research-based instructional methods to meet the varied needs of all learners in today's classrooms, including English language learners, students with a variety of learning styles and abilities and interests. Alternative assessment methods and strategies to manage a differentiated instructional setting.

### **EDUC-445 School-wide Positive Behavioral and Intervention Support**

3 cr.

Repeatable for Credit: No

Principles of school-wide positive behavioral interventions and supports (PBIS). Roles and functions of the PBIS team, action planning for sustainable practices, data collection systems and tools, and data analysis for planning three-level interventions and monitoring progress.

### **EDUC-446 Using Games for Learning and Assessment**

1 cr.

Repeatable for Credit: No

Integration of interactive games and simulations with the curriculum, implications for effective assessment. Use of games to support collaboration, problem solving, decision making, and to increase motivation and engagement in the classroom, including benefits and drawbacks.

### **EDUC-447 Teaching Students with Autism in the Inclusive Classroom**

3 cr.

Repeatable for Credit: No

Strategies to address the varied social and academic needs of students with Autism Spectrum Disorders in the inclusive classroom; functional behavior assessment and behavior intervention plans, educational interventions, and technology considerations.

### **EDUC-448 Math Assessment for Response to Intervention**

2 cr.

Repeatable for Credit: No

Principles of using universal screeners and curriculum-based measures (CBMs) to assess student performance in mathematics. Use of assessment tools in mathematics to identify learning problems, to monitor student growth, and implement Response to Intervention (RTI) practices.

### **EDUC-450 Integrating Social Media Instructional Strategies**

1 cr.

Repeatable for Credit: No

Social media instructional strategies for professional development, global collaborative initiatives, learning-community development and collaborations. Digital citizenship and learning outcomes and assessment using social media.

### **EDUC-451 Project-based Learning in the Flipped Classroom**

2 cr.

Repeatable for Credit: No

Instructional strategies for design, management, and assessment of standards-focused, project-based learning (PBL) in the flipped classroom. Use of multimedia and online resources to support collaboration and increase learner motivation and engagement.

### **EDUC-452 Universal Design for Learning**

2 cr.

Repeatable for Credit: No

Instructional design strategies that support a wide range of learner differences; create barrier-free learning by applying universal design concepts.

### **EDUC-453 Middle School Through Adult 6-Traits Writing Instruction**

3 cr.

Repeatable for Credit: No

Concepts, instructional methods and assessment strategies for improving writing instruction, middle school through postsecondary. Self-assessment strategies, application of 6-traits, technology and software applications, and writing across the curriculum.

### **EDUC-454 PK Through Elementary 6-Traits Writing Instruction**

3 cr.

Repeatable for Credit: No

Application of the 6-Traits theory to assessment and instruction of student writing in PK through grade 4. Study of the continuum of primary and elementary language arts skills and writing across the curriculum.

### **EDUC-455 Strategies for Dealing with Disruptive Behavior**

3 cr.

Repeatable for Credit: No

Evidence-based preventive strategies, effective interventions, and classroom management strategies for addressing problem behaviors, chronic noncompliance and intermittent disruptive conduct.

### **EDUC-456 Bullying in Schools**

2 cr.

Repeatable for Credit: No

Issues, educational interventions and instructional strategies for creating a safe learning environment to break the cycle of bullying and cyber bullying.

### **EDUC-457 Effective Classroom Management**

2 cr.

Repeatable for Credit: No

Research-based strategies for effective management of the K-12 classroom including organization of time, physical space, curriculum, instruction, and assessment to minimize and prevent classroom management problems and create a classroom culture that supports cooperative learning.

### **EDUC-458 Issues in STEM Education**

3 cr.

Repeatable for Credit: No

Issues related to science, technology, engineering and mathematics (STEM) education; research-based instructional strategies for engaging diverse learners, and career pathways in STEM-related fields.

### **EDUC-461 Advances Trends and Issues in PK-5 Mathematics Teaching**

3

Repeatable for Credit: No

Research, issues and problems related to teaching PK-5 mathematics, including problem-based learning, curricular decision-making, diagnosis and remediation, and building assessment into instruction.

### **EDUC-462 Leadership for Math Specialists**

3 cr.

Repeatable for Credit: No

Using theory, research-based evidence, data and organizational change principles to develop, lead, evaluate, and improve PK-12 mathematics programs.

### **EDUC-463 Leadership for Math Specialists**

3 cr.

**Using theory, research-based evidence, data and organizational change principles to develop, lead, evaluate, and improve PK-12 mathematics programs.**

Repeatable for Credit: No

Using theory, research-based evidence, data and organizational change principles to develop, lead, evaluate, and improve PK-12 mathematics programs.

### **EDUC-495 Personal Learning Experience**

2 cr.

Repeatable for Credit: No

An experimental program for juniors and seniors. By permission of program directors. Each student selects an area of life which involves ethical decision and investigates that decision-making process. The group enrolled for this experience meets with the directors twice a week for direction, discussion, and criticism. Self-evaluation paper at the close of the course, which is submitted to the critique of the directors and other members of the learning experience.

### **EDUC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Electricity/Electronics**

### **ELEC-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ELEC-204 Electricity/Electronics Fundamentals**

3 cr.

Repeatable for Credit: No

Electricity/electronics, associated phenomena related to basic electrical and electronics systems. Examines devices, operation, application, theory from power devices to electronic devices, controls to microprocessors.

*Math Placement or MATH-120*

### **ELEC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ELEC-260 Electrical Circuits**

3 cr.

Repeatable for Credit: No

Concepts and analysis techniques in DC and AC circuit analysis including current, voltage, resistance, capacitance, inductance, impedance, loop and node equations, transients, network theorems, real, reactive and apparent power in AC circuits.

*Prerequisites: take PHYS-211 and MATH-153, or take PHYS-241*

### **ELEC-271 Digital Logic and Switching**

3 cr.

Repeatable for Credit: No

Analysis and synthesis of combinational and sequential switching circuits. Boolean algebra and number systems, switching functions, minimization, single and multiple output networks, realization of functions, programmable logic devices. Finite state sequential machines, state transition diagrams, machines and state equivalence. Algorithmic state machines and asynchronous state machines.

*Prerequisite: take either ELEC-204 or ELEC-260*

### **ELEC-272 Solid State Electronics**

3 cr.

Repeatable for Credit: No

Basic semiconductor theory dealing with signals, operational amplifiers, diodes, bipolar junction and field effect transistor, frequency response, feedback, and circuit analysis.

### **ELEC-274 Fundamentals Of Microprocessors and Microcomputer Systems**

3 cr.

Repeatable for Credit: No

Concepts of microprocessors, microcomputer architecture, assembly language programming and peripheral components.

Hardware topics include 80 x 86 processors, interrupts, bios, serial and parallel interfaces, video displays, hard drives, CD roms, memory devices and local and peripheral buses.

*Prerequisites: take ELEC-271 and CS-144*

### **ELEC-290 Circuits and Devices**

4 cr.

Repeatable for Credit: No

Electrical and electronic circuits and devices. Analysis of circuits containing passive and active components. Analog and digital circuitry including amplifiers and logic gates. Power calculations in alternating current circuits. Electro-mechanical energy conversion including DC and AC machinery. Lab activities include use of base test equipment and the construction of simple electronic circuits.

*Prerequisites: take MATH-154 and PHYS-282*

### **ELEC-303 Electronics Circuits, Devices and Applications**

3 cr.

Repeatable for Credit: No

Concepts and analysis techniques in DC and AC circuit analysis, basic electronics theory, devices, logic and systems, including capacitance, inductance, impedance, circuit equations, network theorems, signals, op-amps, transistors, and circuit analysis.

Number systems, combinational logic, minimization, programmable logic devices, state machine algorithms, transition diagrams, asynchronous and synchronous sequential logic.

*Prerequisites: take MATH-153 and PHYS-242*

### **ELEC-340 Motors and Generators**

2 cr.

Repeatable for Credit: No

Practical approach to basic operating theory, construction, maintenance of generators, motors, transformers, and machine control.

*Prerequisite: take ELEC-204*

### **ELEC-341 Electrical and Mechanical Interface Devices**

3 cr.

Repeatable for Credit: No

Introduction to control system technology of discrete processes with emphasis on the devices that interface between electrical and mechanical systems. Theory and applications of sensors, actuators, schematics, state charts, ladder diagrams, programmable logic controllers, and PC based data acquisition and control.

*Prerequisites: take either ELEC-204 or ELEC-260; and take PHYS-241 and POWER-260*

### **ELEC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ELEC-382 Electronic Communications**

4 cr.

Repeatable for Credit: No

Electrical/electronic communication systems, modulation, demodulation, R.F. and I.F. amplifiers, alignment, antennas, composite TV signal, receivers, transmitters, spectral representation of signals, amplitude modulation, AM/FM transmitters, side band transmission, AM/FM receivers, and frequency modulation.

*Prerequisite: take ELEC-204*



### **ELEC-395 Seminar**

1-2 cr.

Repeatable for Credit: Yes

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics.

### **ELEC-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

### **ELEC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ELEC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Engineering**

### **ENGN-100 Impacts of Engineering**

3 cr.

**Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Comprehensive study of engineering design from initiation to completion. Definition and history of engineering disciplines with comparisons. Investigation and exploration of past and present impacts on people, society, and the environment. Examination of

contemporary and emerging issues related to engineering. Introduction to engineering in practice through engineering design projects.

## **Engineering Graphics**

### **ENGGR-112 Engineering Graphics Fundamentals**

3 cr.

Repeatable for Credit: No

Fundamentals of engineering graphics: principles, standards and graphic language necessary to communicate technical information on industrial drawings. Includes appropriate software, visualization, geometric concepts and dimensioning basics.

### **ENGGR-134 Computer Assisted Design and Building Modeling Fundamentals**

3 cr.

Repeatable for Credit: No

Tools, concepts and strategies to create digital 2D and 3D project views essential to the building industry. Including Computer Assisted Design(CAD) and Building Information Modeling (BIM) programs that are current industry standard.

### **ENGGR-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGGR-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ENGGR-210 Engineering Graphics Using Solid Modeling**

3 cr.

Repeatable for Credit: No

Engineering graphics principles and standards, development of effective technical communication skills between design, engineering, and manufacturing disciplines. Project planning, solid modeling, assembly composition and drafting techniques to support and solve engineering and design problems.

*Prerequisite: take ENGGR-112*

### **ENGGR-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGGR-256 Engineering Graphics Fundamentals and Solid Modeling**

3 cr.

Repeatable for Credit: No

Fundamentals of engineering graphics: principles, standards and graphic language necessary to communicate technical information on industrial drawings. Includes appropriate CAD (modeling) software, visualization, geometric concepts and dimensioning basics.

### **ENGGR-266 Engineering Graphics Surface Modeling & Rendering**

3 cr.

Repeatable for Credit: No

Development of three-dimensional surface models and rendered images. Organic surface modeling to create models with complex curved surfaces. Rendered images to communicate model concepts.

*Prerequisite: take ENGGR-112*

### **ENGGR-280 Engineering Graphics Applications**

3 cr.

Repeatable for Credit: No

Contemporary software and hardware used to produce solutions for engineering design problems. Topics include comprehensive graphic standards and implementation, advanced methods of producing engineering graphics, tools for improving design efficiency, and alternative communication technologies.

*Prerequisite: Take ENGGR-210*

### **ENGGR-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ENGGR-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGGR-395 Seminar**

1-2 cr.

Repeatable for Credit: Yes

(Title will reflect specific design, research and development content). Current and projected communication methods, concepts, technologies and innovations in design, research and development.

### **ENGGR-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ENGGR-400 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special Topics in design, research and development, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **ENGGR-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGGR-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Engineering Mechanics**

### **MECH-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MECH-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MECH-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **MECH-290 Mechanics of Solids I**

3 cr.

Repeatable for Credit: No

Technical calculations, dimensional analysis, freebody diagrams, force systems and equilibrium, friction, elementary statically determinate framed structures, and simple stress.

*Prerequisites: take PHYS-241, or PHYS-281*

## **MECH-291 Mechanics of Solids II**

3 cr.

Repeatable for Credit: No

Stress and strain, torsion, bending of beams, compound stress, principal stress, deflection of beams, statically indeterminate members and columns.

*Prerequisite: take MECH 290*

## **MECH-292 Dynamics**

3 cr.

Repeatable for Credit: No

Kinematics of particles, rigid bodies, and systems. Analysis of position, velocity, and acceleration. The relationship between the motion of bodies and forces or torques. Study of particles and rigid bodies subject to translation, rotation, and general planar motion using Newton's laws of motion, Work-energy methods, impulse-momentum methods, and mechanical vibrations.

*Prerequisite: take PHYS-291*

## **MECH-293 Engineering Mechanics**

3 cr.

Repeatable for Credit: No

Force systems, free body diagrams, and static equilibrium in two and three dimensions. Internal reactions, friction, and frames.

Kinematic analysis of particle and rigid body translation, rotation, and general planar motion. Force-acceleration analysis.

*Prerequisite: take PHYS-281*

## **MECH-294 Mechanics of Materials**

3 cr.

Repeatable for Credit: No

Normal and shear stresses and strains. Stresses and deformations in objects subject to axial, torsional, and flexural loadings.

Shear and bending moment diagrams. Stress transformations and principle stresses.

*Prerequisite: take PHYS-291*

### **MECH-298 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **MECH-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MECH-332 Mechanical Design**

4 cr.

Repeatable for Credit: No

Analysis and design of machine elements: gearing bearings, shafting and friction devices.

*Prerequisites: take MECH-290 and MECH-291*

### **MECH-337 Mechanical Design Practicum**

3 cr.

Repeatable for Credit: No

Practical application of mechanical design in a team project. Creativity, documentation standards, design for manufacturability, design analysis, team dynamics, communication skills, and finite element analysis are applied to an industrial standard in the design of a machine, system, or product.

*Prerequisites: take ENGR-280 and MECH-332 (may be concurrently enrolled)*

### **MECH-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MECH-393 Mechanics of Machinery II**

3 cr.

Repeatable for Credit: No

Graphical analysis and synthesis of linkages, cams, gear trains, displacement, velocity, acceleration and dynamic forces.

*Prerequisite: take MECH-290*

### **MECH-398 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **MECH-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MECH-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MECH-498 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **MECH-499 Independent Study**

1-3 cr.



Repeatable for Credit: Yes  
Department Consent

### **MFGE-415 Machine Vision and Robotics**

2 cr.

Repeatable for Credit: No

Design of machine vision and industrial robotic applications, including cost justification.

*Prerequisites: take INMGT-300 and MECH 292*

## **Engineering Technology**

### **ET-100 Introduction to Engineering Technology**

1 cr.

Repeatable for Credit: No

Definition, history, and future of the engineering technology field and the present and emerging concentration areas. Business and industry links to options within engineering technology and the necessary preparation to meet graduates' future professional demands.

### **ET-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ET-405 Capstone I: Design Practicum**

3 cr.

Repeatable for Credit: No

Capstone course for all Engineering Technology concentrations. Practical application of concentration topic in a team project.

Creativity, documentation standards, design for manufacturability, design analysis, team dynamics, finite element analysis, and communication skills are applied to an industrial standard in the design of a machine, system, or product.

*Prerequisites or concurrent enrollment in MECH-332 or MFGT-343 or INMGT-440 or INMGT-365 or ELEC-274; Senior status*

### **ET-410 Capstone II: Design Lab**

3 cr.

Repeatable for Credit: No

An experimental study in the design of electro- mechanical systems. Design, functional prototype construction, experimentation and validation of systems are emphasized.

*Prerequisites: take ET-405 and ELEC-341*

### **ET-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ET-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **English (also see LIT)**

### **ENGL-80 Reading, Writing, and Grammar**

6 cr.

Repeatable for Credit: No

Basic reading, writing and grammar skills in English. Credits earned will not count toward graduation. (ENGL-80 is the same as ESLI 51A and ESLI 51B .)

### **ENGL-90 Writing Workshop**

3 cr.

Repeatable for Credit: No

Developmental composition course required of students who score below the designated cut-off on the Wisconsin English Placement Test for admission into ENGL-101. Prepared students for ENGL-101 and the rigors of college writing. Grade of "C"

or better required to move on to ENGL-101. Course does not count toward graduation but is included in the student's course load, fees, and grade point average.

## **ENGL-101 Composition 1**

3 cr.

### **Communication Skills - Writing**

Repeatable for Credit: No

Introductory, first-semester composition course required of students who achieve a designated score on the Wisconsin English Placement Test or a score of "C" or better in ENGL-90. Practice in college-level writing, critical thinking and reading.

Introduction to academic research, source-supported writing, argumentation, and conventions of structure, style, grammar, mechanics, and format appropriate to specific rhetorical situations. Students must receive a "C-" or better in ENGL-101 to move on to ENGL-102.

*English Placement Required*

## **ENGL-102 Composition 2**

3 cr.

### **Communication Skills - Reading**

Repeatable for Credit: No

Second-semester composition course required of students who receive a grade of "C-" or higher in ENGL-101. Continued development, through advanced academic research and inquiry, of the rhetorical and critical reading, writing, and thinking skills acquired in ENGL-101. Focus on synthesizing a variety of readings and texts, including imaginative literature. Further refinement of documentation skills and academic writing practices and conventions.

*Prerequisite: C- or better in either ENGL-101 or ENGL-111*

## **ENGL-111 Freshman English--Honors I**

3 cr.

### **Communication Skills - Writing**

Repeatable for Credit: No

Readings in world literature and related writing for training in composition techniques; documented paper.

*ENGL-111 Placement*

## **ENGL-112 Freshman English--Honors II**

3 cr.

### **Communication Skills - Reading**

Repeatable for Credit: No

Continuation of ENGL 111.

*Prerequisite: take either ENGL 101 or ENGL 111*

### **ENGL-113 Honors Seminar I**

3 cr.

Repeatable for Credit: No

Intensive reading and writing that examines topics in world literature from Shakespeare to the present.

Department Consent

*Prerequisite: take either ENGL 101 or ENGL 111*

### **ENGL-121 Introduction to Professional Communication**

3 cr.

Repeatable for Credit: No

Trends, opportunities, and technologies shaping the field of professional communication. Career paths and specializations as well as ethical responsibilities.

*Prerequisite: Professional Communication & Emerging Media majors only*

### **ENGL-125 Professional Writing Elements of Style**

3 cr.

Repeatable for Credit: No

Develop stylistic fluency through study of interaction of rhetoric, style, and grammar. May not be substituted for any required English composition course.

*Prerequisite: take either ENGL 101 or ENGL 111*

### **ENGL-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGL-207 Writing for the Media**

3 cr.

Repeatable for Credit: No

Theory and practice of writing for the media.

*Prerequisites: ENGL 102 or ENGL 112 or ENGL 113*

### **ENGL-210 Journalism Practicum**

1 cr.

Repeatable for Credit: Yes

Work on regularly published newspaper and submit articles for evaluation and publication.

Department Consent

*Prerequisites: ENGL 102 or ENGL 112 or ENGL 113*

### **ENGL-215 Foundations of Technical Communication**

3 cr.

Repeatable for Credit: No

Overview of major writing and documentation forms and conventions used in technical communication, including document design strategies, technical reports, and other professional texts.

*Prerequisites: ENGL 102 or ENGL 112 or ENGL 113*

### **ENGL-218 Mass Communication: Effects of the Technology on Society**

3 cr.

#### **Technology**

Repeatable for Credit: No

The ideological and social implications of mass communication technology.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **ENGL-225 Editing Processes and Practices**

3 cr.

Repeatable for Credit: No

Comprehensive editing, copy editing, proofreading, and style selection; review of Standard Written English grammar and usage.

*Prerequisites: take ENGL-102 or ENGL-112 or ENGL-113; and take ENGL-125*

### **ENGL-245 Creative Writing**

3 cr.

**Creative Arts, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: Yes

Introduction to creative writing with an ethics component in four genres: Poetry, fiction, drama, and creative nonfiction.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-247 Critical Writing**

3 cr.

#### **Communication Skills - Writing**

Repeatable for Credit: No

The art of evaluation and judgment; writing critical reviews and articles; documented critical paper.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGL-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ENGL-312 Transnational Professional Communication**

3 cr.

Repeatable for Credit: No

Theories and practical approaches to the global aspects of professional communication, including translation and cross-cultural visual communication. Apply cultural models in order to understand and address the needs of users and colleagues from different cultural and linguistic backgrounds.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-317 Topics in Journalism**

1-3 cr.

Repeatable for Credit: No

Intensive study of and practice in topics in journalism.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-320 Business Writing**

3 cr.

Repeatable for Credit: No

Written communication in business: practice in writing memos, letters, electronic correspondence, reports and other practical communication.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-330 Feature Writing**

3 cr.

Repeatable for Credit: No

Plan, research and create feature articles for newspapers, magazines and online publications; develop research tools and writing skills; observe ethical and legal considerations in writing.

*Prerequisite: take ENGL-207*

### **ENGL-335 Critical Approach to Digital Humanities**

3 cr.

Repeatable for Credit: No

Explores the rhetoric of technologies and the dynamic interaction between digital technologies and society.

### **ENGL-340 The Structure of English**

3 cr.

Repeatable for Credit: No

New analytic and descriptive methods applied to modern English.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-342 Creative Writing II**

3 cr.

Repeatable for Credit: No

Advanced practice in creative writing that builds on skills taught in ENGL-245 Creative Writing, focusing on genre specific

texts.

*Prerequisite: take ENGL-245*

### **ENGL-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGL-350 Digital Storytelling**

3 cr.

Repeatable for Credit: No

Create and critique visual and digital stories and the deployment of digital and visual media tools to tell a variety of stories from diverse social and cultural contexts.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-361 Hypertext Writing**

3 cr.

Repeatable for Credit: No

Investigate writer and audience interaction in a hypertext environment. Gain exposure to and utilize markup languages to maximize audience participation in websites and other hypertext documents. Research, production and testing of an original website and hypertext essays.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-370 Developing Health Messages**

3 cr.

Repeatable for Credit: No

Theories and practical approaches to the creation of effective health messages. Providing an understanding of how to recognize the diverse needs of health consumers with a focus on addressing health literacy issues, create health messaging tools and write for both specialized and general health audiences.

Instructor's Consent Required

### **ENGL-371 Rhetoric and Style: Strategies of Argumentation**



3 cr.

Repeatable for Credit: No

Examines classical rhetoric to identify enduring elements and concerns as well as critical tensions and conflicts. Students will obtain the vocabulary and conceptual understanding of the rhetorical tradition with attention to development both oral and written arguments.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-385 Document Design**

3 cr.

Repeatable for Credit: No

Approaches to transmitting information in print and screen documents through the application of rhetorical and design principles.

### **ENGL-388 Writing for the Internet**

3 cr.

Repeatable for Credit: No

Investigate writer and audience interaction in hypertext and multimedia environments, and gain exposure to an utilize markup languages to maximize audience participation. Research, produce, and test an original hypertext or multimedia artifact.

### **ENGL-396 Expository Writing (Travel Writing in Scotland)**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Forms, strategies and styles of expository writing. Emphasis on travel writing in Scotland, appropriate style and mechanics for presenting travel writing.

### **ENGL-396 Mass Media History**

3 cr.

Repeatable for Credit: No

Highlights of the origins, growth and evolution of America's mass media from their early Western European background to the diversity of the modern day.

### **ENGL-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ENGL-407 Seminar in Applied Journalism**

3 cr.

Repeatable for Credit: No

Investigation into journalistic practices in particular disciplines, industries, and trades. Students will research, synthesize, and apply journalistic practices to their chosen field.

*Prerequisite: take ENGL-207*

### **ENGL-410 Scientific Communication**

3 cr.

Repeatable for Credit: No

Written and oral communication strategies for scientific careers, including the creation of data displays, proposals, and technical reports to articulate research methodologies and disseminate findings for broad audiences.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-415 Technical Writing**

3 cr.

Repeatable for Credit: No

On-the-job writing for business and industry; reports, letters and other documents.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-418 Convergent Communication**

3 cr.

Repeatable for Credit: No

Defining and analyzing convergent medial practices in professional communication disciplines, industries and trades; exploring how convergence of print, video/audio and online media has influenced professional writing.

*Prerequisite: take ENGL-218*

### **ENGL-425 Usability Design and Testing**

3 cr.

Repeatable for Credit: No

Plan, design, and conduct tests, measure effectiveness and efficiency of written and online documents; examine methodology and application of usability testing to demonstrate its value and importance.

*Prerequisite: take ENGL-415*

### **ENGL-430 Writing for Content Management**

3 cr.

Repeatable for Credit: No

Concepts and practices of content management systems for the creation and production of technical communication both in print and online. Includes document workflow, globalization and translation of content for assembly of relevant documents. Uses case studies and client-based projects.

*Prerequisite: take either ENGL-215 or ENGL-415*

### **ENGL-435 Writing Technical Manuals**

3 cr.

Repeatable for Credit: No

Production of a technical manual--planning procedure, collecting information, analyzing audience, writing and field testing.

*Prerequisite: take either ENGL-215 or ENGL-415*

### **ENGL-437 Technical Writing Practicum**

1-3 cr.

Repeatable for Credit: Yes

Plan, write and produce a technical document for a client. Principles of document design, clear writing for a specific audience, methods of determining client needs, and methods of producing the final document.

Department Consent

### **ENGL-440 Writer at Work Seminar**

2 cr.

Repeatable for Credit: No

Introduction to and practice in the professional side of creative writing, including but not limited to publication, reading, writers conferences and grant writing. Instructor's consent

*Prerequisite: take ENGL-342*

### **ENGL-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENGL-470 Special Topics in Health Communication**

3 cr.

Repeatable for Credit: No

In-depth study of special topics in the field of health communication.

### **ENGL-471 Professional Communication Capstone**

3 cr.

Repeatable for Credit: No

Preparing to enter the job market in a professional communication field, both as a full-time employee and as a freelancer or consultant. Practical issues such as networking, self-employment, copyright and portfolio development. Production of a significant client-based capstone project.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **ENGL-475 Applied Health Communication Capstone**

3 cr.

Repeatable for Credit: No

Completion of an original research or field experience project for business or industry. Results in either a deliverable for a client with a project report or a research paper.

Instructor's Consent Required

Completion of an original research or field experience project for business or industry. Results in either a deliverable for a client with a project report or a research paper.

### **ENGL-480 Seminar in Digital Humanities**

3 cr.

Repeatable for Credit: No

Research into and discussion of current and emerging issues in the digital humanities. Subject matter covered will vary to reflect the state of current research.

*Prerequisite: Take ENGL-335*

### **ENGL-495 Digital Humanities Capstone**

3 cr.

Repeatable for Credit: Yes

Development of student-initiated research project in the digital humanities over two semesters. Results in thesis in medium appropriate to topic.

*Prerequisite: Take ENGL-335*

### **ENGL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **English as a Second Language Institute**

### **ESLI-10A Beginning ESL Listening and Speaking Skills I**

3 cr.

Repeatable for Credit: No

Developing basic listening and speaking skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-10B Beginning ESL Listening and Speaking Skills II**

3 cr.

Repeatable for Credit: No

Further developing and reinforcing basic listening and speaking skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-11A Beginning ESL Reading, Writing, and Grammar Skills I**

3 cr.

Repeatable for Credit: No

Developing basic reading and writing skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-11B Beginning ESL Reading, Writing and Grammar Skills II**

3 cr.

Repeatable for Credit: No

Further developing and reinforcing basic reading and writing skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-12A Fluency Development I**

3 cr.

Repeatable for Credit: No

Developing fluency in listening and reading comprehension of authentic English materials, and in production of oral fluency, through a variety of realistic communicative tasks.

### **ESLI-12B Fluency Development II**

3 cr.

Repeatable for Credit: No

Further developing fluency in listening and reading comprehension of authentic English materials, and in production of oral fluency, through a variety of realistic communicative tasks.

### **ESLI-13A Pronunciation, Phonics and Reading Development I**

1.5 cr.

Repeatable for Credit: No

Developing pronunciation and reading skill through the study of phonics, the sounds of English, and extensive reading assignments. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-13B Pronunciation, Phonics and Reading Development II**

1.5 cr.

Repeatable for Credit: No

Further developing pronunciation and reading skill through the study of phonics, the sounds of English, and extensive reading assignments. Course includes one hour of mandatory lab section.  
Department Consent

### **ESLI-20A High Beginning Listening and Speaking Skills I**

1-3 cr.  
Repeatable for Credit: No  
Developing listening and speaking skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.  
Department Consent

### **ESLI-20B High Beginning Listening and Speaking Skills II**

1-3 cr.  
Repeatable for Credit: No  
Further developing listening and speaking skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.  
Department Consent

### **ESLI-21A High Beginning ESL Reading, Writing and Grammar Skills I**

1-3 cr.  
Repeatable for Credit: No  
Developing reading and writing skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.  
Department Consent

### **ESLI-21B High Beginning Reading, Writing and Grammar Skills II**

3 cr.  
Repeatable for Credit: No  
Further developing reading and writing skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.  
Department Consent

### **ESLI-22A Intensive Listening and Vocabulary Development I**

1.5 cr.

Repeatable for Credit: No

Developing listening skill and vocabulary through meaning-focused listening activities with authentic English materials. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-22B Intensive Listening and Vocabulary Development II**

1.5 cr.

Repeatable for Credit: No

Further developing listening skill and vocabulary through meaning focused listening activities with authentic English materials. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-30A Low Intermediate Listening and Speaking Skills I**

1-3 cr.

Repeatable for Credit: No

Developing basic listening and speaking skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Instructor's Consent Required

### **ESLI-30B Low Intermediate Listening and Speaking Skills II**

1-3 cr.

Repeatable for Credit: No

Further developing basic listening and speaking skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department Consent

### **ESLI-31A Low Intermediate ESL Reading, Writing and Grammar Skills I**

1-3 cr.

Repeatable for Credit: No

Developing academic reading, writing and grammar skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department Consent



### **ESLI-31B Low Intermediate ESL Reading, Writing and Grammar Skills II**

1-3 cr.

Repeatable for Credit: No

Further developing academic reading, writing and grammar skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department Consent

### **ESLI-32A Fluency Development I**

1.5 cr.

Repeatable for Credit: No

Developing fluency in listening and reading comprehension of authentic English materials, and in production of oral English, through a variety of realistic communicative tasks. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-32B Fluency Development II**

1.5 cr.

Repeatable for Credit: No

Further developing fluency in listening and reading comprehension of authentic English materials, and in production of oral English, through a variety of realistic communicative tasks. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-40A High Intermediate ESL Listening and Speaking Skills I**

1-3 cr.

Repeatable for Credit: No

Developing academic listening and speaking skills to communicate effectively in English in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-40B High Intermediate ESL Listening and Speaking Skills II**

1-3 cr.

Repeatable for Credit: No

Further developing and reinforcing academic listening and speaking skills to communicate effectively in English in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-41A High Intermediate ESL Reading, Writing and Grammar Skills I**

1-3 cr.

Repeatable for Credit: No

Developing academic reading, writing and grammar skills for succeeding in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-41B High Intermediate ESL Reading, Writing and Grammar Skills II**

1-3 cr.

Repeatable for Credit: No

Further developing and reinforcing academic reading, writing and grammar skills for succeeding in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-42A High Intermediate Current Events**

3-6 cr.

Repeatable for Credit: No

Applying reading, writing, listening, speaking and critical thinking skills learned in ESLI core courses to the study of current events.

### **ESLI-42B High Intermediate Current Events II**

3-6 cr.

Repeatable for Credit: No

Further applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses to the study of current events.

### **ESLI-43A Intensive Writing and Editing Skill Development I**

1.5 cr.

Repeatable for Credit: No

Developing writing skills at the upper levels through editing and focused rewriting. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-43B Intensive Writing and Editing Skill Development II**

1.5 cr.

Repeatable for Credit: No

Further developing writing skills at the upper levels through editing and focused rewriting. Course includes one hour of mandatory lab section.

Department Consent

### **ESLI-50A Low Advanced ESL Listening and Speaking Skills I**

1-3 cr.

Repeatable for Credit: No

Developing more of the necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-50B Low Advanced ESL Listening and Speaking Skills II**

1-3 cr.

Repeatable for Credit: No

Further developing and reinforcing more of the necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-51A Low Advanced ESL Reading, Writing and Grammar Skills I**

1-3 cr.

Repeatable for Credit: No

Continuing to develop academic reading, writing and grammar skills necessary for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-51B Low Advanced ESL Reading, Writing and Grammar Skills II**

1-3 cr.

Repeatable for Credit: No

Continuing to further develop and reinforce academic reading, writing and grammar skills necessary for success in an American

university classroom. Course includes 2 hours of mandatory lab/discussion.  
Instructor's Consent Required

### **ESLI-52A Writing, Revising and Editing Workshop I**

1.5 cr.

Repeatable for Credit: No

Building the skills necessary to be a valuable member of a peer group, identifying the characteristics of good academic writing, and applying the criteria for good academic writing to your own and peer group members' writing. Includes one hour of mandatory lab/discussion.

Department Consent

### **ESLI-52B Writing, Revising and Editing Workshop II**

1.5 cr.

Repeatable for Credit: No

Developing skills necessary to be a valuable member of a peer group, identifying the characteristics of good academic writing, and applying the criteria for good academic writing to your own and peer group members' writing. Includes one hour of mandatory lab/discussion.

Department Consent

### **ESLI-56A Advanced Project-Based Course I**

1.5 cr.

Repeatable for Credit: No

Applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses and working collaboratively to solve a problem or develop a product that will be shared with the larger Stout and Menomonie communities. Course includes one hour of mandatory lab/discussion.

Department Consent

### **ESLI-56B Advanced Project-Based Course II**

1.5 cr.

Repeatable for Credit: No

Further applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses and working collaboratively to solve a problem or develop a product that will be shared with the larger Stout and Menomonie communities. Course includes one hour of mandatory lab/discussion.

Department Consent

### **ESLI-60A High Advanced ESL Listening and Speaking Skills I**

1-3 cr.

Repeatable for Credit: No

Refining and sharpening necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-60B High Advanced Listening and Speaking Skills II**

1-3 cr.

Repeatable for Credit: No

Reinforcing and further refining and sharpening necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-61A High Advanced ESL Reading, Writing and Grammar Skills I**

1-3 cr.

Repeatable for Credit: No

Refining and sharpening academic reading, writing and grammar skills for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-61B High Advanced ESL Reading, Writing and Grammar Skills II**

1-3 cr.

Repeatable for Credit: No

Reinforcing and further refining and sharpening academic reading, writing and grammar skills for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's Consent Required

### **ESLI-62A University Success I**

1.5 cr.

Repeatable for Credit: No

Preparation for the cultural and academic expectations of the American university classroom. Includes one hour of mandatory lab/discussion.

Instructor's Consent Required

## **ESLI-62B University Success II**

1.5 cr.

Repeatable for Credit: No

Advanced preparation for the cultural and academic expectations of the American university classroom. Includes one hour of mandatory lab/discussion.

Instructor's Consent Required

## **Environmental Science**

### **ENSC-101 Environmental Science Profession**

1 cr.

Repeatable for Credit: No

A survey of the Environmental Science program and academic support services to advance students' career goals. Research, leadership, internship, service learning, and other important career enhancing experiences will be explored. Participation in inclusive excellence activities will expose students to issues that are relevant in an increasingly culturally diverse work environment.

### **ENSC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ENSC-398 Field Experience in Environmental Science**

1-6 cr.

Repeatable for Credit: No

A field experience in environmental science in an approved position consisting of a minimum of 320 hours of work experience. Student learning objectives, employer evaluations, student evaluation, interim reports, and a final written report and oral presentation are required.

Department Consent

### **ENSC-425 Environmental Science and Sustainability Capstone**

3 cr.

Repeatable for Credit: No

Sustainable solutions to real-world problems will be developed through partnerships with private, public, and/or industrial sectors of society. Projects will be taken from the ideation phase to the completion of the required final documentation. The design of a triple-bottom-line solution will be emphasized.

*Prerequisite: BIO-350 and Senior standing*

## **ENSC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **Family and Consumer Sciences Education**

### **FCSE-101 Introduction to Family and Consumer Sciences Education**

2 cr.

Repeatable for Credit: No

Contribution of Family and Consumer Sciences to development of individuals and families; responsibilities of a Family and Consumer Sciences professional.

### **FCSE-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FCSE-201 Teaching Methods in Family and Consumer Sciences Education**

2-3 cr.

Repeatable for Credit: No

Presentation strategies appropriate in the field family and consumer sciences education. Background check required.

### **FCSE-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FCSE-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **FCSE-300 Externship: Family and Consumer Sciences Community Education**

4-8 cr.

Repeatable for Credit: No

Practicum in one or more of the following family and consumer sciences education programs: extension services, elementary education, post- secondary education, occupational teaching experience and community educational services. Approval of graduate program director required if taken for graduate credit.

Department Consent

### **FCSE-303 Family and Consumer Sciences Education in the Middle and Elementary Schools**

3 cr.

Repeatable for Credit: No

Develop techniques, materials and curriculum concepts in family and consumer sciences education with application of human growth and development principles for teaching in middle and elementary school.

### **FCSE-341 Prestudent Teaching in FCSE Classrooms**

1 cr.

Repeatable for Credit: Yes

Supervised experience in classroom teaching for development of motor, perceptual, social and cognitive learning through family and consumer sciences education substantive areas.

Benchmark I Completed



### **FCSE-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FCSE-355 Seminar: Emerging Practices and Classroom Management**

3 cr.

Repeatable for Credit: No

Issues and trends in marketing, business and family and consumer sciences education. Experiences necessary for success during student teaching and upon initial career entry. Focus on classroom management and discipline, lab management and safety, facilities design, academic standards, curriculum issues, ethical challenges and politics in the workplace, preparing for a professional role in education, innovative instructional technologies, promising practices and other education reform strategies.

### **FCSE-380 Consumer Economics**

3 cr.

Repeatable for Credit: No

Personal and family consumer economics for family and consumer education programs; management of human and non-human resources in achieving personal, family and community goals.

*Prerequisites: take either ECON-201 or ECON-210*

### **FCSE-385 Family Housing**

3 cr.

Repeatable for Credit: No

Individual/family's housing needs and resources as a basis for family and consumer education programs. The impact of historical, environmental, social, cultural, and technological, aesthetic, and design influences.

### **FCSE-390 Family and Consumer Sciences Education Curriculum**

2 cr.

Repeatable for Credit: No

Curricula design principles and practices in Career and Technical Education (CTE). Content will challenge personally held ideas,

assumptions, and practices related to curricula and its stakeholders. The products of learning include standards-based course, lesson, and assessment tools that are anchored to the mission, goals, and standards specific to the teacher-candidates CTE program area in Family and Consumer Sciences Education.

Prerequisite: Benchmark I completion

### **FCSE-397 Field Experience in Family and Consumer Sciences Education**

2 cr.

Repeatable for Credit: No

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

Department Consent

### **FCSE-448 Student Teaching-Family and Consumer Sciences Education**

8-16 cr.

Repeatable for Credit: No

Student teaching practicum in K-12 settings in family & consumer sciences education/family life.

Department Consent

*Prerequisites: Must have minimum GPA 2.75; take FCSE-301 and FCSE-360*

### **FCSE-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FCSE-451 Family Life Education Programs**

2 cr.

Repeatable for Credit: No

Development of family life education programs including methods, materials and techniques for teaching family relationships and child development at the secondary level.

### **FCSE-488 Internship Teaching**

8-16 cr.

Repeatable for Credit: No

Alternate method of obtaining student teaching experience. Teacher interns receive license to teach and salaried appointments in cooperating school systems for one semester.

Department Consent

*Prerequisite: take FCSE-301*

### **FCSE-497 Field Experience in Family and Consumer Sciences Education**

2 cr.

Repeatable for Credit: No

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

Department Consent

### **FCSE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Food and Nutrition**

### **FN-101 Dietetics as a Profession**

1 cr.

Repeatable for Credit: No

Survey of types of dietetic and foodservice administration programs in the United States; role and function of staff; professional literature.

### **FN-102 Nutrition for Healthy Living**

2 cr.

#### **Health and Physical Education - Health**

Repeatable for Credit: No

Food selection and eating patterns/standards, applied nutrition knowledge and interrelationships, nutrition information source analysis, weight management, the nutrition- exercise-fitness connection. Analysis of personal lifestyle and food patterns in relationship to optimal physical and mental well- being.

### **FN-105 Food Service Sanitation**

1 cr.

Repeatable for Credit: No

Preparation for the ServSafe Food Protection Manager Certification Examination. Safe food handling practices.

### **FN-110 Food Science as a Profession**

2 cr.

Repeatable for Credit: No

Introduction to Food Science and Technology with emphasis on current issues, competencies, career opportunities, and professional responsibilities; coursework and career planning; leadership and success skills; field visits and case studies in the food and agricultural industry.

### **FN-115 Principles of the Food Industry**

2 cr.

Repeatable for Credit: No

Analysis of food processes, procedures and regulations. Application to protocols of the food industry. Appreciation of safe and healthy food service products.

### **FN-123 Science of Food**

2 cr.

**Global Perspective, Natural Sciences - Life Sciences**

Repeatable for Credit: No

Integrated scientific concepts in food products and ingredients; food composition and physical properties; methods, processes, and unit operations in food manufacturing.

### **FN-124 Foods**

4 cr.

Repeatable for Credit: No

Scientific principles and application in the selection, preparation and service of food.

### **FN-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FN-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **FN-202 Food And Beverage Distribution Industry**

3 cr.

Repeatable for Credit: No

An introductory course for students in the field of food and beverage merchandising and distribution. A study of history, evolution, classification, manufacture/production, packaging, distribution, and merchandising with an emphasis on trends and employment. Resource persons from industry and field trips will be utilized.

### **FN-207 Medical Terminology**

1 cr.

Repeatable for Credit: No

Medical terminology for allied health occupations. Self-paced instruction utilizing a word-building system to learn word parts used to construct or analyze new terms. Emphasis on spelling, definition, usage and pronunciation.

### **FN-210 Issues and Ethics in Food and Nutrition**

3 cr.

#### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Apply ethical reasoning and interdisciplinary approaches to analyze and solve contemporary issues in food and nutrition.

### **FN-212 Nutrition**

3 cr.

Repeatable for Credit: No

Basic principles of nutrition applied to current issues in health maintenance.

*Prerequisites: take BIO-132 or BIO-234 and take CHEM-115 or CHEM-125*

### **FN-215 Art and Science of Food**

3 cr.

Repeatable for Credit: No

Analysis and application of food principles applied to storage, preparation and service. Special emphasis on food safety and the art of food preparation.

*Prerequisite: take HT 121*

### **FN-222 Food Technology**

2 cr.

#### **Global Perspective, Technology**

Repeatable for Credit: No

Food processing technology and how it impacts society, individual health and well-being, environment and the future; technological innovations and new developments to meet the changing requirements of society and increasing global demand for food. A special course fee applies.

### **FN-225 Spec Topics in Food and Nutrition**

1-2 cr.

Repeatable for Credit: Yes

Study of special topics in food and nutrition.

### **FN-236 Nutrition for Young Children**

1-2 cr.

Repeatable for Credit: No

Impact of nutrition on growth, development and health of young children. Assessment of nutritional status, changing needs and eating patterns, the link between nutrition, dietary practices, and behavior, and translating current nutrition information into effective nutrition education strategies for children.

*Prerequisites: take FN-102*

### **FN-240 Food Science**

4 cr.

Repeatable for Credit: No

Physical and chemical changes affecting selection, preparation and service of food.

*Prerequisite: take CHEM-201*

### **FN-244 Farm to Fork: Food Issues**

3 cr.

#### **Contemporary Issues**

Repeatable for Credit: No

Contemporary issues in agriculture, food production, and food processing; science, technology, and policy in the food system; critiques in agricultural sustainability; food consumption choice; food system changes and implications on individuals and society.

### **FN-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FN-260 Menu Planning and Design**

2 cr.

Repeatable for Credit: No

Principles of menu planning, design and production for commercial and institutional food establishments.

### **FN-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **FN-310 Lifespan Nutrition**

3 cr.

Repeatable for Credit: No

Nutrition concepts and concerns associated with each lifespan stage; integration of social, psychological, cultural, economic, and legislative factors to develop issue-centered approaches to meet nutrition needs.

Prerequisites: take FN-102; take one Biology course

### **FN-312 Nutritional Assessment**

2 cr.

Repeatable for Credit: No

Introduction to basic components of nutritional assessment as applied to individuals.

Prerequisite: take FN-212

### **FN-320 Advanced Nutrition**

3 cr.

Repeatable for Credit: No

Concepts of the metabolic and physiological functions of nutrients at the molecular, cellular, tissue, organ and system level.

Emphasis on coordinated control of nutrient metabolism.

*Prerequisite: take FN-212 and CHEM-311*

### **FN-325 Special Topics in Food and Nutrition**

1-3 cr.

Repeatable for Credit: Yes

Study of special topics in food and nutrition.

*Prerequisite: take either FN-124 or FN-215*

### **FN-330 Institutional Menu Planning**

3 cr.

Repeatable for Credit: No

Principles of cycle menu planning, design, and marketing for institutional food settings, which includes culinary skills, basic food preparation and modified menus to meet the special dietary needs of an individual or group.

*Prerequisite: take FN-212*

### **FN-342 Advanced Foods**

3 cr.



Repeatable for Credit: No

Comparative studies of food selection and preparation; appraisal of foods.

*Prerequisite: FN-124 or FN-240*

### **FN-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FN-350 Unit Operations in Food Processing**

3 cr.

Repeatable for Credit: No

Principles, technology, and application of unit operations in food processing; laboratory and pilot-scale processing of food and agricultural commodities; quantitative measurements and analysis of unit operations.

*Prerequisite: take FN-240*

### **FN-355 Sports Nutrition**

3 cr.

Repeatable for Credit: No

Nutritional and metabolic requirements of physical activity. Metabolic fuel utilization during exercise and physiological adaptations to exercise training will be discussed. The health and well-being benefits of an optimal diet-exercise regime will be emphasized.

*Prerequisite: take FN-212*

### **FN-360 Nutrition Counseling: A Team Approach**

3 cr.

Repeatable for Credit: No

Inter-disciplinary team approach to individual and group client centered nutrition counseling which includes assisting and advising clients on dietary information. Skills and techniques based on nutrition counseling theories that are most useful to registered dietitians in enhancing quality of life and planned nutrition intervention.

*Prerequisite: take FN-312*

### **FN-380 Community Nutrition**

3 cr.

Repeatable for Credit: No

Current status and legislation of community nutrition programs. Assessment of community needs and resources, program planning, funding, and evaluation. The role of the community nutritionist/home economist to help individuals, families, and communities solve nutrition problems.

*Prerequisite: take FN-212*

### **FN-396 Food Science Workshop**

2 cr.

Repeatable for Credit: No

Designed to meet the science and family and consumer sciences standards in Wisconsin. Content presented will build capacity for food science and science teachers to create science-based learning experiences related to food.

Instructor's Consent Required

### **FN-396A Obesity and Eating Disorders**

3 cr.

Repeatable for Credit: No

Examines the complex issues associated with obesity and eating disorders. Consideration of health and psycho-emotional effects on the individual as well as relevant social, economic, and public health implications. Exploration of the etiology of obesity and the spectrum of disordered eating as well as appropriate treatment approaches.

*Prerequisites: take FN-102 or FN-212*

### **FN-397 Field Experience**

2 cr.

Repeatable for Credit: No

### **FN-397C Field Experience (Seminar): Dietetics**

1-2 cr.

Repeatable for Credit: No

Field experience related to the dietetic areas. Prior approval of field position, 320 hours of work experience, and seminar. Written reports required for two-credit option.

Department Consent

### **FN-397E Field Experience: Dietetics**

1 cr.

Repeatable for Credit: No

Field experience related to the dietetic areas. Prior approval of field position, 320 hours of work experience, and seminar. Written reports required for two-credit option.

Department Consent

### **FN-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **FN-400 Food Quality**

4 cr.

Repeatable for Credit: No

Applications of qualitative and quantitative tools in conjunction with statistical methods to implement quality management in the food industry.

*Prerequisites: Take FN-350, and take either STAT 130 or STAT-320*

### **FN-406 Nutrition Education**

3 cr.

Repeatable for Credit: No

Nutrition education as planned behavioral change: problems and solutions in instructing various populations; identification, development and evaluation of nutrition resources.

*Prerequisite: take FN-212*

### **FN-408 Preprofessional Development in Dietetics and Nutrition**

1 cr.

Repeatable for Credit: No

Provide a step by step, efficient and effective process toward completion of application for Supervised Practice Programs (Dietetic Internships), graduate school or employment.

### **FN-410 Food & Nutrition Policy Regulation & Law**

3 cr.

Repeatable for Credit: No

Food and nutrition policy development and evolution. Key acts and agencies governing food regulation and law. Process of creating or changing law. Compliance and enforcement rules in inspection, labeling, export and import. Administrative practice in food law including proceedings and judicial review.

### **FN-413 Maternal and Child Nutrition**

3 cr.

Repeatable for Credit: No

Application of principles to maternal, infant, child and adolescent nutrition.

*Prerequisites: take FN-212 & take either BIO-132 or BIO-234*

### **FN-414 Catering**

3 cr.

Repeatable for Credit: No

Theory and application of operational and managerial principles for on/off-premise catering for special events. (Cannot be taken for credit by students who have previously taken HT-424.) A special course fee applies.

*Prerequisite: FN-124 or FN-240*

### **FN-415 Nutritional Issues in Gerontology**

3 cr.

Repeatable for Credit: No

Theory and relationships of nutrition, longevity and aging. Food and nutrition legislation for the elderly--theory and implementation. Nutritional implications of acute and chronic disease states common among the elderly.

*Prerequisite: take FN-212*

### **FN-417 Medical Nutritional Therapy I**

3 cr.

Repeatable for Credit: No

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporates principles of medical nutritional therapy in nutrition assessment, diet prescription, medications, care plans and documentation.

*Prerequisites: take FN-312 and CHEM-311*

### **FN-418 Medical Nutritional Therapy II**

4 cr.

Repeatable for Credit: No

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporation of the principles of nutrition assessment, diet prescription, medications, care plans, and documentation into the management of disease processes.

*Prerequisites: take CHEM-311, FN-312 and FN-417*

### **FN-420 Food Styling**

1-3 cr.

Repeatable for Credit: Yes

Food as media for artistic expression; effective use of color, form and texture.

*Prerequisite: FN-124 or FN-240*

### **FN-425 Food Chemistry**

3 cr.

Repeatable for Credit: No

Chemical structure and properties of food components, including water, carbohydrates, protein, lipids, other nutrients and food additives; chemical reactions of food components during processing, storage and utilization.

*Prerequisite: take FN-240*

### **FN-431 Readings in Food Science and Nutrition**

1-2 cr.

Repeatable for Credit: Yes

Critical reading, evaluating, and reporting from pertinent current journals and other publications.

### **FN-435 Food Analysis**

3 cr.

Repeatable for Credit: No

Principles and methods in analysis of nutritive and bioactive components in food; nutrient and ingredient characterization; analytical methods in food quality and safety assurance; standard methods in the food quality control laboratory.

*Prerequisite: take CHEM-315*

### **FN-438 Experimental Foods**

3 cr.

Repeatable for Credit: No

Experimentation with selected food materials, techniques and equipment; directed study in individually chosen area.

*Prerequisites: take FN-124 or FN-240, and take CHEM-115 or CHEM-125 or CHEM-135*

### **FN-442 Basic Sensory Analysis**

3 cr.

Repeatable for Credit: No

Basic understanding of the psychobiology and physiology of senses and the role both play in consumer product acceptance. Basic tests of sensory analysis, including both objective trained panel difference tests and subjective preference/ acceptance tests.

Appropriate for all majors who produce products for/or merchandise to consumers.

*Prerequisite: FN-124 or FN-240*

### **FN-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department Consent

### **FN-450 Food Engineering**

3 cr.

Repeatable for Credit: No

Application of pertinent chemistry, physics and mathematics principles to food processing.

*Prerequisites: take CHEM-201, MATH-153, MATH-154, and FN-350*

### **FN-461 Multicultural Aspects of Food & Nutrition Patterns**

3 cr.

Repeatable for Credit: No

Food and nutrition patterns as influenced by social, religious, geographical, economic and political factors. Cultures emphasized include Native American, African American, Hispanic and Asian American. Food as a means of cross-cultural communication.

*Prerequisite: FN-124 or FN-240*

### **FN-465 Food Product Development**

3 cr.

Repeatable for Credit: No

Food ingredient properties; integrated application of professional competencies for food product development.

*Prerequisite: take FN-350*

### **FN-470 Food Distribution Operations and Control**

3 cr.

Repeatable for Credit: No

Current trends and management strategies in the distribution of food and beverages, from manufacturer to consumer.

FN-202 and BUMKG-330

### **FN-480 Research Critiques in Food Microbiology**

3 cr.

Repeatable for Credit: No

Research evidence examining mechanistic concepts in microbial food spoilage, infectious disease and molecular epidemiology.

Methods of assessing safety risks and design of interventions to manage risks in food processing environments.

*Prerequisites: Take BIO-306 or CHEM-311*

### **FN-497C Field Experience: Food Systems and Technology**

1 cr.

Repeatable for Credit: No

Seminar: analysis, interpretation and synthesis of food systems and technology principles through a written paper and oral seminars following 320 hours of field work in an approved position. Integrates synergistic principles/activities from program courses and among concentrations.

Department Consent

### **FN-497E Field Experience: Food Systems and Technology**

1 cr.

Repeatable for Credit: No

Food systems and technology area field experience. Approved field position, 320 hours of work experience, and development of concept/outline for written analysis paper.

Department Consent

### **FN-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **French**

### **FREN-101 Elementary French I**

4 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Listening, pronunciation, reading, and writing. Basic vocabulary, polite phrases, questions and answers. Adjective agreement, present and some past-tense verbs. Cultural information about the French-speaking world.

### **FREN-102 Elementary French II**

4 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Second level of understanding, speaking, reading, and writing in French. Introduction to future, conditional, imperfect and subjunctive verbs. Direct and indirect object pronouns. Short spontaneous and directed conversations. topics in cultures of French-speaking people. One year H.S. French or FREN-101 required.

### **FREN-121 Practical French I**

2 cr.

#### **Foreign Language Global Perspective**

Repeatable for Credit: No

First quarter college French. Conversational phrases and vocabulary for practical situations. Basic present tense verb patterns. Intensive pronunciation drill. Not for students who have taken FREN-101.

*Not for students who took FREN-101.*

### **FREN-122 Practical French II**

2 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Second quarter college French, conversational phrases and vocabulary, irregular and past tense verb patterns. Not appropriate for



students who have completed FREN-101. One year of H.S. French or FREN-121 required.  
*Not for students who took FREN-101.*

### **FREN-123 Practical French III**

2 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Third quarter college French. Imperfect and reflexive verbs, direct and indirect object pronouns, commands, conversational vocabulary. Not for student who have complete FREN-102. One year H.S. French or FREN-101 required.

### **FREN-124 Practical French IV**

2 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Fourth quarter college French. Future, conditional and subjunctive verbs. Introduction to relative pronouns. Conversational vocabulary. (Not for students who have completed FREN-102.)

*Not for students who took FREN-102.*

### **FREN-201 Intermediate French I**

4 cr.

#### **Foreign Language and Culture, Foreign Language Global Perspective**

Repeatable for Credit: No

Vocabulary development through readings and discussion on French and Francophone civilization. History, art, music, short stories and poems, including contemporary culture. Taught in French. Two years H.S. French or FREN-102 required.

### **FREN-202 Intermediate French II**

4 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Grammar review, contemporary vocabulary, free conversation in French. Three years H.S. French or FREN-201 required.

### **FREN-299 Independent Study**

1-3 cr.

**Foreign Language Global Perspective**

Repeatable for Credit: Yes

Department Consent

**FREN-499 Independent Study**

1-3 cr.

**Foreign Language Global Perspective**

Repeatable for Credit: Yes

Department Consent

**Game Design and Development****GDD-101 Introduction to Video and Computer Game Design and Development**

3 cr.

Repeatable for Credit: No

Principles of video and computer game design and development. Students design and develop games, analyze a popular game, and learn about various aspects of the game industry. Game design, story development, visual art production and programming.

**GDD-101 Introduction to Video and Computer Game Design and Development**

3 cr.

Repeatable for Credit: No

Principles of video and computer game design and development. Students design and develop games, analyze a popular game, and learn about various aspects of the game industry. Game design, story development, visual art production and programming.

**GDD-325 Two Dimensional Game Design and Development**

4 cr.

Repeatable for Credit: No

Design and develop two-dimensional games from concept to completion in teams. Production environment will be set up to reflect the approach used in the game development industry.

*Prerequisite: take either CS-244 or DES-220*

**GDD-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **GDD-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **GDD-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **GDD-450 Three-Dimensional Game Design and Development I**

4 cr.

Repeatable for Credit: No

Design and development of 3D games from concept to prototype in teams, modeling the approach used in the game development industry. The first of a two-semester sequence to be followed by GDD-451.

CS-343

*Prerequisites: Take GDD-325 and one of the following: 1) completion of or concurrent enrollment in CS-343; or 2) DES-372 and completion of or concurrent enrollment in either DES-374, DES-378, or DES-379*

### **GDD-450 Three-Dimensional Game Design and Development I**

4 cr.

Repeatable for Credit: No

Design and development of 3D games from concept to prototype in teams, modeling the approach used in the game development industry. The first of a two-semester sequence to be followed by GDD 451 .

*Prerequisites: Take GDD-325 and one of the following: 1) completion of or concurrent enrollment in CS-343; or 2) DES-372 and completion of or concurrent enrollment in either DES-374, DES-378, or DES-379*

## **GDD-451 Three-Dimensional Game Design and Development II**

4 cr.

Repeatable for Credit: No

Design and development of 3D games from concept to prototype in teams, modeling the approach used in the game development industry. Second of two-semester sequence; to be preceded by GDD-450.

*Prerequisite: Take GDD-450*

## **GDD-475 Game Design and Development Internship**

1-3 cr.

Repeatable for Credit: Yes

Off-campus work and study in approved position to gain experience in game development. Interns receive appointments with cooperating companies for summer or a semester.

Instructor's Consent Required

## **GDD-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Geography**

### **GEOG-104 World Geography**

3 cr.

**Global Perspective, Social and Behavioral Sciences - Geography**

Repeatable for Credit: No

Introduction to regional and cultural geography of the world; physical and human resources of major areas of the globe.

*Not open to students taking GEOG-251*

### **GEOG-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **GEOG-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **GEOG-251 Introduction to Geographic Information Systems**

4 cr.

Repeatable for Credit: No

Experience, using state of the art GIS and GPS equipment and theoretical background explaining the many roles GIS technology has in displaying analyzing spatial problems. Major components include computer representation of geographic information, fundamentals of cartography, construction of GIS databases, spatial analysis, and application areas of GIS.

### **GEOG-290 Global Political Ecology**

3 cr.

**Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

### **GEOG-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **GEOG-310 Geography of Food**

3 cr.

**Social and Behavioral Sciences, Contemporary Issues, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

Analysis of food "geographies" - how food travels from farm to table; the importance of geography in the production, distribution and consumption of food. Exploration of issues of food democracy, food justice, and food sovereignty. Special attention to racial and class-based inequities within the global food system.

### **GEOG-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **GEOG-351 Intermediate Geographic Information Systems**

4 cr.

Repeatable for Credit: No

Basic analytical operations in Geographic Information Systems using GIS software.

*Prerequisite: take GEOG-251*

### **GEOG-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **GEOG-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **GEOG-451 Advanced Geographic Information Systems**

4 cr.

Repeatable for Credit: No

Integration of Geographic Information Systems (GIS) and analytical and quantitative methodologies using spatial analysis,

geostatistical analysis, network analysis, and 3-D analysis.

*Prerequisite: take GEOG-351*

## **GEOG-452 Geographic Information Systems Research Analysis**

2-4 cr.

Repeatable for Credit: No

Individualized research applying advanced GIS techniques to problems related to students' areas of study under the supervision of faculty members in their programs. Students plan, design and execute GIS projects which build geographic databases, analyze data spatially, and present results.

*Prerequisite: take GEOG 451*

## **GEOG-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Golf Enterprise Management**

### **GEM-101 Introduction to Golf Enterprise Management**

1 cr.

Repeatable for Credit: No

Overview of the B.S. in Golf Enterprise Management, the golf industry, national and international golf associations, and careers in the golf industry.

### **GEM-201 Principles of Golf Enterprise Management**

3 cr.

Repeatable for Credit: No

Comprehensive survey of golf facility operations and management from perspectives of resort, private, semi-private, and daily fee courses, to include principles of business, customer service, human resource management, course design and management, retail and back shop operations, food and beverage management, and event planning.

### **GEM-207 Club Fitting and Repair**

2 cr.

Repeatable for Credit: No

Overview, techniques, customer satisfaction, and benefits of custom golf club fitting and repair in golf enterprise management. A special course fee applies.

*Prerequisites: take GEM-201 and PE-129*

### **GEM-217 Golf Swing Analysis and Instruction**

2 cr.

Repeatable for Credit: No

Fundamentals of teaching golf including grip, setup, alignment and the full swing. Students will analyze golf swings and correct errors in swing fundamentals.

*Prerequisites: Take GEM-207 and MATH-123*

### **GEM-224 Fitting and Swing Analysis**

4 cr.

Repeatable for Credit: No

Introduction to technical applications in equipment design, player personalized fitting and play analysis. Club fitting, repair or club equipment, swing analysis, play design and evaluation in a lab or golf course setting will be presented.

*Prerequisites: take GEM 101 and GEM 201*

### **GEM-250 Turfgrass Management for Golf Courses**

3 cr.

Repeatable for Credit: No

Investigates the broad subject of turfgrass management. Emphasis is placed on the application of basic turfgrass principles to golf course turfgrass culture.

*Prerequisite: take GEM-101*

### **GEM-277 Software and Technology**

3 cr.

Repeatable for Credit: No

Investigates the use of software and technology in the golf industry. Marketing, revenue planning, tee time management, point of sale, guest and staff scheduling and performance evaluation will be analyzed using proprietary industry software.

*Prerequisite: take GEM-101*



### **GEM-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **GEM-301 Customer Development, Retention and Marketing**

3 cr.

Repeatable for Credit: No

Current trends and programs for golf course customer recruiting and retention, marketing strategies, conducting and applying market research including database and internet marketing for golf course customer development and retention in public fee, semi-private, private and resort facilities.

*Prerequisites: take GEM-101 and GEM-201, and take either BUMKG-330 or HT-344*

### **GEM-325 Golf Shop Merchandising**

3 cr.

Repeatable for Credit: No

Specialized study of golf shop merchandising operations, including purchasing of soft goods and golf equipment, visual presentation, inventory, and financial reporting.

Must be Sophomore level or higher

### **GEM-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **GEM-350 Golf Course Soils, Layout, and Design**

3 cr.

Repeatable for Credit: No

Introduction to golf course layout and design, including soil characteristics that affect successful turf grass establishment and maintenance. topics include soil components, physical and chemical soil properties, drainage, irrigation, golf course layout, design and construction, and risk assessment.

*Prerequisites: take GEM-101 and GEM-201*

### **GEM-445 Sports Event Management**

3 cr.

Repeatable for Credit: No

Planning, organization and the management of events will be investigated for the hospitality, tourism and golf industries. Emphasis is placed on the design, internal management systems and post-event evaluation.

Must be Sophomore level or higher

### **GEM-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **GEM-450 Environmental Golf Course Management**

3 cr.

Repeatable for Credit: No

Emphasizes the applied knowledge related to golf course operations and environmental perspective towards effective management.

*Prerequisite: take GEM-250*

### **GEM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Health**

### **HLTH-101 Discovering Wellness**

1 cr.

**Health and Physical Education - Health**

Repeatable for Credit: No

Introduction to the components and benefits of high level wellness; includes self-assessment and the development of an action plan for lifetime wellness.

### **HLTH-196 Discovering Wellness**

3 cr.

#### **Health and Physical Education - Health**

Repeatable for Credit: No

Analysis of consequences of personal decisions and personal lifestyle choices related to personal health and well-being.

Techniques employed in the promotion of health information, services and products. Focuses on the needs of pre-professional elementary and secondary education students in Scotland.

### **HLTH-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HLTH-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HLTH-296 Basic Life Support and CPR**

1 cr.

#### **Health and Physical Education - Health**

Repeatable for Credit: No

Correct techniques according to American Red Cross to provide heartbeat and breathing in victims of cardiac arrest by means of external check compression and mouth-to-mouth resuscitation. Upon successful completion, students will be certified by the American Red Cross in community CPR.

### **HLTH-296B Contemporary Health Issues**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Exploration and analysis of contemporary health trends in the U.S., U.K., and globally. The implications for the individual, family, community, and society will be explored. Emphasis is placed on the prevention of health problems through the thoughtful examination of ethical issues and exercising of personal responsibility relative to lifestyle choices.

**HLTH-296C Stress Management**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Students observe and identify environments and behaviors of Scottish people compared to their home environments. Students identify risky and health behaviors in Scotland compared to the U.S. Two questions will be answered: how do we learn to manage stress to achieve optimal wellness, and is stress a global epidemic?

**HLTH-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**HLTH-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**HLTH-350 Prevention and Care of Athletic Injuries**

3 cr.

Repeatable for Credit: No

Provides prospective physical education and/or coaching professional with basic understanding of prevention, treatment and care of athletic injuries.

*Prerequisites: take HWF-340 and BIO-234*

### **HLTH-355 Kinesiology**

3 cr.

Repeatable for Credit: No

Body movements and principles affecting them.

*Prerequisite: take BIO-132*

### **HLTH-365 Physiology of Exercise**

3 cr.

Repeatable for Credit: No

Effects of exercise on sports participants: heat stress, body composition, nutrition, cardiovascular function, energy expenditure, respiratory mechanics and ventilation factors.

*Prerequisite: take BIO-132*

### **HLTH-396 Wellness: A Personal Choice**

3 cr.

**Health and Physical Education - Health**

Repeatable for Credit: No

Consequences of personal decisions and personal lifestyle choices related to personal health and well-being. Focuses on needs of elementary and secondary school teachers.

### **HLTH-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HLTH-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HLTH-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Health Education**

### **HLTED-360 Personal Health and Fitness**

3 cr.

Repeatable for Credit: No

Analysis of consequences of individual decisions and lifestyle choices related to personal health and well-being.

### **HLTED-375 Methods In Health, Wellness and Fitness**

3 cr.

Repeatable for Credit: No

Health education teaching methods, teaching health related concepts: stress management, cardiovascular fitness, nutrition, and physical testing.

### **HLTED-376 Organization and Administration of Health Education**

3 cr.

Repeatable for Credit: No

Planning, promoting, and implementing comprehensive health education programs at the elementary, middle, and secondary levels. Needs assessment; curriculum development and coordination; public relations; and the development of cooperative relationships with parents, private business, and voluntary and community health agencies.

Department Consent

### **HLTED-485 Health Education Student Teaching**

2 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

## **HLTED-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Health, Wellness and Fitness**

### **HWF-100 Introduction to Health, Wellness & Fitness Industry**

2 cr.

Repeatable for Credit: No

Exploration of the major components, systems, and processes of the health, wellness, and fitness industry. Examination of past and present trends and key components in various industry sectors. Advisement on course sequence, field experience and career opportunities.

### **HWF-275 Lifespan Health, Wellness and Fitness**

3 cr.

Repeatable for Credit: No

Understanding the importance of a healthy lifestyle throughout the lifespan. Examination of health, history, medications, culture, ages, lifestyles, predisposed health conditions, injury/physical challenges, and the individual's goals/objectives.

### **HWF-322 Fitness Assessment**

2 cr.

Repeatable for Credit: No

Fitness evaluation theory and practice.

*Prerequisites: take BIO-234*

### **HWF-340 Community CPR, Automatic External Defibrillation and First Aid**

3 cr.

#### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

American Red Cross Certification - Adult, child and infant CPR, automated external defibrillator use, first aid; personal safety, accident prevention knowledge; sudden illness recognition; respond/administer emergency techniques; social responsibility, ethical reasoning, first aid and emergency situations. A special course fee applies.

### **HWF-348 Stress Assessment and Intervention**

3 cr.

Repeatable for Credit: No

Theory and methods related to stress interpretation, recognition and intervention. Developing skills necessary for identifying stressors and applying appropriate intervention techniques that will lead to a healthy lifestyle. Designing prescription plans for individual and groups.

### **HWF-370 Personal and Group Exercise: Theory and Methods**

3 cr.

Repeatable for Credit: No

Theory and methods related to personal and group fitness. Developing skills necessary for teaching fitness classes in various settings. Designing prescription plans for individuals and groups. Current and past fitness trends.

### **HWF-380 Fitness Club Management**

3 cr.

Repeatable for Credit: No

Managerial and supervisory concerns with an emphasis on human resources management, planning, policies, procedures, finances, programming, marketing and risk management in fitness centers.

### **HWF-390 Recreational Facilities Management and Leadership**

3 cr.

Repeatable for Credit: No

Basic methods, concepts, and procedures of planning, programming, budgeting, project management, and operations management. Theories and principles of personal, managerial, and administrative leadership in recreational services; identification of policies, health and emergency procedures, and contingency plans for the operation of recreational leagues and tournaments.

*Prerequisites: Take BUMGT-304*

### **HWF-398 Field Experience in Health, Wellness and Fitness**

1 cr.

Repeatable for Credit: No

Work and study in an approved health, wellness or fitness position. Students will work under supervision in this experience.



Minimum of 160 contact hours.  
Department Consent

### **HWF-418 Administration of Strength Training and Conditioning**

4 cr.

Repeatable for Credit: No

Exercise science and its application to program design, implementation, and evaluations. Preparation for the National Strength and Conditioning Association (NSCA) and the Certified Strength and Conditioning Specialist (CSCS) examinations.

*Prerequisites: take BIO-234*

### **HWF-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HWF-498 Advanced Field Experience in Health, Wellness and Fitness**

1-3 cr.

Repeatable for Credit: Yes

Work and study in an approved health, wellness or fitness position. Students will work with supervision in this experience.

Minimum of 320 contact hours.

Department Consent

## **History**

### **HIST-120 Early United States History**

3 cr.

**History, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

U.S. history to 1865: political, economic and social forces that have shaped the nation to close of Civil War.

### **HIST-121 Modern United States History**

3 cr.

**History, Racial & Ethnic Studies Category B, Global Perspective**

Repeatable for Credit: No

U.S. history since 1865: political, economic and social forces that have shaped the nation since close of Civil War.

**HIST-130 Greeks, Romans, and Barbarians: Use and Misuse of Global Pasts**

3 cr.

**History, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

A look at real histories of ancient Greece, Rome, and the so-called barbarian kingdoms that succeeded them to better understand the use and misuse of history in American popular culture today. A comparison of the myths, art, philosophy, magic, religion, and politics of the ancients with their contemporary portrayals in film, news, social media, advertising, and politics.

**HIST-140 Western Civilization**

3 cr.

**History**

Repeatable for Credit: No

Survey of Western civilization along the Nile, the Fertile Crescent, through Greece, Rome, the Middle Ages, the Renaissance, and the Reformation.

**HIST-141 Western Civilization**

3 cr.

**History**

Repeatable for Credit: No

Survey of Western civilization from Reformation to present.

**HIST-196 Origins Of Current World Conflicts**

3 cr.

**Humanities and the Arts - History**

Repeatable for Credit: No

Three or four topics selected from the following: Middle East, Russia-China, Yugoslavia, Poland, Northern Ireland, and other areas of present or future conflict. Emphasis on past national, religious, economic, and social developments as they relate to the present.

## **HIST-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **HIST-210 Modern World**

3 cr.

**History, Global Perspective**

Repeatable for Credit: No

Modern trends in terms of historical backgrounds as frame of reference for interpreting modern world.

## **HIST-221 Wisconsin State History**

3 cr.

**Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Wisconsin history from pre-contact through the present with emphasis on settlement by American Indians, economic changes, sports and outdoor recreation, politics and politicians, and the development of an challenges to the Wisconsin Idea.

*Must be Sophomore level or higher*

## **HIST-230 Sexualities in Historical and Social Perspective**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality.

Contemporary controversies such as gay marriage and other civil rights issues.

## **HIST-240 History and Politics of Africa**

3 cr.

**Contemporary Issues, Global Perspective, Humanities and the Arts - History, Social and Behavioral Sciences - Political Science**

Repeatable for Credit: No

Familiarity with cultures and civilizations of Africa, historical roots of modern situations. Emergence of human culture; traditional societies; colonialism and racism; regional persistence; independence and development; civil war and ethnic conflict; participation in a global economy.

### **HIST-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HIST-290 Words, Images, Sounds and the Projection of Global Culture**

3 cr.

**History, Contemporary Issues, Global Perspective**

Repeatable for Credit: No

Ways in which traditional historical and anthropological formats have been impacted by new forms of visual media. An appreciation of new techniques in historical and anthropological analysis and practical experience in multimedia presentations of important global questions.

### **HIST-296 Women and Gender in Europe: 1750 To Present**

3 cr.

**Global Perspective, Humanities and the Arts - History**

Repeatable for Credit: No

History of women and gender ideas in Western Europe and the changing status of women in European society. Using writings by and about women, explore how women's identities were shaped and how they sought to gain greater access to political, social, and economic equality.

### **HIST-296C Women's History: Comparative U.S. and the U.K.**

3 cr.

**Global Perspective, Humanities and the Arts - History**

Repeatable for Credit: No

Provides essential understanding of U.S. women's history from 1900-1950 in comparison to women of the United Kingdom.

Special focus on economics, social, cultural and political development. Offered only through the Wisconsin in Scotland program.

Department Consent

### **HIST-296D History of U.S. Civil Rights movement and the World Reaction**

3 cr.

**Global Perspective, Humanities and the Arts - History**

Repeatable for Credit: No

The United States civil rights movement from 1940 to 2008, examining the movement itself and the world reaction to the U.S., drawing on social policy, political activities, sociology and social history with an emphasis on aspects of the struggle for minority groups. Offered only through the Wisconsin in Scotland program.

Department Consent

**HIST-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**HIST-310 Sexualities in Historical and Social Perspective**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality. Contemporary controversies such as gay marriage and other civil rights issues.

*Must be Sophomore level or higher*

**HIST-311 Women and War: A Global Perspective in the Modern Era**

3 cr.

**History, Global Perspective**

Repeatable for Credit: No

Examines the lives and roles of women in conflicts from 1789 to the present during wars in Europe, Africa, Asia, and Latin America with minor focus on the United States.

**HIST-321 United States Women's History**

3 cr.

**History, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Political, economic, and social contributions of women to United States history. Examination of the historical interaction of ethnicity, class, and sexual orientation with gender. Strong focus on the changes in gender expectations and the historical creation of stereotypes and inequality.

### **HIST-322 African-American History**

3 cr.

#### **History, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

Social, cultural, economic and political history of African-Americans, with special focus on the United States.

### **HIST-323 American Immigration and Ethnic History**

3 cr.

#### **History, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

American immigration and ethnic history from the nation's colonial roots to the present. Conceptualization of immigration and ethnicity in historical perspective; the immigration experience; interaction with and responses of the established native populations to the arrival of diverse others; continuing issues of immigration and ethnicity in a historical perspective.

*Must be Junior level or higher*

### **HIST-324 United States Labor History**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Evolution of work and the changing circumstances of workers in the U.S.: First Industrial Revolution through the 1990s; analysis of race/ethnicity and gender in the rise of unions, the creation of the managerial class, communes, agriculture, technology, and the service sector. Exploration of the ethics of labor rights in a democracy and limitations on "free" labor.

*Must be Sophomore level or higher*

### **HIST-325 History of American Indians**

3 cr.

#### **Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

American Indian history with emphasis on areas that become the U.S., from pre-contact through the 20th century. Topics include origins, the history and ethics of encounters with colonists, treaties, resistance of U.S. encroachment, land and resource control, identity politics, and appropriation of Indian symbols, objects, culture, and history.

*Must be Sophomore level or higher*

### **HIST-330 History of World War II**

3 cr.

**History, Global Perspective**

Repeatable for Credit: No

Causes, conduct and effects of World War II.

**HIST-335 World War II: An Ethnic and Global History**

3 cr.

**History, Racial & Ethnic Studies Category B, Global Perspective**

Repeatable for Credit: No

Examine World War II through exploration of ethnicity and race both in the United States and abroad.

*Must be Sophomore level or higher*

**HIST-340 Mixed-Heritage History of the Americas**

3 cr.

**Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Examine and analyze mixed-heritage history in the Americas, especially as it relates to the development of historically contingent ethnic and racial categories during colonial and national periods, the ethics and policing of those categories, and the mediation of "authentic" identity in historical context.

*Must be Sophomore level or higher*

**HIST-347 Introduction To British Civilization**

3 cr.

**History, Arts and Humanities**

Repeatable for Credit: No

British society, culture, economy and politics in the modern period since 1850. Offered only at the Wisconsin in Scotland (WIS) Center.

**HIST-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HIST-350 History of the Vietnam War**

3 cr.

#### **History**

Repeatable for Credit: No

American role in the Vietnam War, particularly goals, objectives and dilemmas faced by American policymakers; roles and contributions of American men and women in the military and in civilian society; development and impact of the anti-war movement; and long-term consequences of the war on American culture and society.

### **HIST-360 Asian History**

3 cr.

#### **History**

Repeatable for Credit: No

Survey of political, social, religious and economic history of Asia, India, China, Japan and the Philippines in modern world.

### **HIST-377 History of Ideas in the Twentieth Century**

3 cr.

#### **Global Perspective, Humanities and the Arts - History, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Technology and mechanical production processes effects on world outlook. Historical survey of important twentieth-century thinkers in film, literature, psychology, physics, and philosophy who have assessed the impact of technology on individuality, creativity, and our potential for ethical engagement around the globe.

### **HIST-380 Latin American History**

3 cr.

#### **History**

Repeatable for Credit: No

Political, social and economic history of Middle and South America, pre-Columbian to present.

### **HIST-390 Modern History of Science and Technology**

3 cr.

#### **Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Examines a global history of science and technology. Themes include: scientific theories and methods within their intellectual contexts; relationships between science, technology, and society; interactions between cultural groups (Western; non-Western) as impacted by science and technology; impacts of science and technology on race, gender, and other groups.



### **HIST-391 History of Social Science and Race**

3 cr.

#### **History, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

History of social science and its applications, especially focused on ideas about race. Themes include: development of theories and methods; relationships between knowledge and applications; behavioral and normative diversity of cultural and other groupings; changing beliefs about race and ethnicity.

### **HIST-392 History of Mad Science**

3 cr.

#### **History, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Moral execution of scientific methods by exploring important cases of wrongdoing. Themes include ethical responsibilities at each step in the scientific process; examples of misbehavior in the history of science; recent examples of controversial research; contemporary strategies for preventing unethical science.

### **HIST-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HIST-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **HIST-460 History Methods**

2 cr.

Repeatable for Credit: No

Historiography and application of the historical method, including the study of teaching methods, instructional materials, and

evaluation techniques.

*History minors only*

### **HIST-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Hospitality and Tourism**

### **HT-100 Introduction to Hospitality**

2 cr.

#### **Global Perspective**

Repeatable for Credit: No

Exploration of the major components and organization structure of the hospitality industry. Presents historical development, opportunities and current trends. Stresses the importance and relationship of education and work experience to career success. Examination of the key components in various industry sectors including food service, lodging, tourism, gaming, and property management.

### **HT-101 Principles of Hospitality Organizational Management**

3 cr.

Repeatable for Credit: No

Explore the major components and organization structure of the hospitality industry, while preparing students for management opportunities. The class will study hospitality operations with a focus on management, leadership and organizational behavior.

### **HT-121 Principles of Foodservice Operations**

3 cr.

Repeatable for Credit: No

Professional segments of foodservice operations: history, types of operations, functions, facilities design, equipment, basic cooking principles, dining room service, and management concepts.

### **HT-140 Principles of Tourism**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Scope, structure, and function of tourism as an industry and a sociocultural phenomenon; industry components and the importance of maximizing costs to its stakeholders.

**HT-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

**HT-150 Institutional Food Purchasing**

2 cr.

Repeatable for Credit: No

Methods of large-quantity food purchasing: determining standards, specific needs and industrial offerings; formulating specifications, buying procedures and controls.

**HT-200 Hospitality Organization Management**

3 cr.

Repeatable for Credit: No

Management principles for hotels and restaurants, supervisory development and training, labor relations, managerial interpretation and evaluation of current systems and procedures.

*Prerequisite: take HT-100*

**HT-235 Lodging Systems**

3 cr.

Repeatable for Credit: No

Examination of the basic skills needed in a lodging facility. Specific roles, functions, and policies pertaining to the Rooms Division.

*Must be Sophomore level or higher*

**HT-240 Tourism Goods and Services**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Analysis of tourism goods and services in relationship to future patterns of supply and demand.

*Prerequisites: take HT-140 and ECON-210*

**HT-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

**HT-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**HT-315 Gaming Management**

3 cr.

Repeatable for Credit: No

Overview of casino gaming operations in the Hospitality and Tourism industry from a global and local perspective. A special course fee applies.

**HT-316 Casino Operations Management**

3 cr.

Repeatable for Credit: No

Functions and transactions associated with the gaming operations environment within a resort casino.

**HT-317 Psychosocial Issues in Gaming**

3 cr.

Repeatable for Credit: No

A hospitality management and societal perspective of the pros and cons of gambling entertainment.  
*Must be Junior level or higher*

### **HT-323 Food Service Equipment**

2 cr.

Repeatable for Credit: No

Factors affecting design, selection, physical facilities and utilities involved in foodservice equipment.

### **HT-324 Quantity Food Production**

3 cr.

Repeatable for Credit: No

Quantity food production management concepts; menu planning, work production schedules, production analysis, food and labor cost controls, and sales projections, crisis and service management techniques; lab work in quantity food production and service; recipe development and introduction to productivity and work simplification concepts.

*Prerequisites: Take HT 121 and FN-115 and FN-215, or take FN-124 and FN-240*

### **HT-325 Food Service Production and Operations Management**

3 cr.

Repeatable for Credit: No

Examination and synthesis of principal production and operational challenges facing managers in the food service industry using various control systems required to maximize the quality and profitability in the food service operation.

Prerequisite: take HT-121

### **HT-326 Introduction to Wines and Spirits**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Applied and historical knowledge of wines and spirits from different regions of the world; emphasis on preparation, selection, accompaniment with food, basic cost control analysis and service. A special course fee applies.

*Must be 21 years of age or older*

### **HT-330 Resort Planning and Operation**

3 cr.

Repeatable for Credit: No

Planning and operation of individual destination resorts. Analysis of resort concept, history, master planning, environmental impact, facility design, maintenance and operational management.

### **HT-335 Lodging Operations Management**

3 cr.

Repeatable for Credit: No

Investigation of supervisory roles in lodging management, with an emphasis on the importance of financial statements and their interpretation, human resources and productivity, and providing quality hospitality services within all types of lodging facilities.

*Prerequisites: take HT 235*

### **HT-340 Development of Tourism Attractions**

3 cr.

Repeatable for Credit: No

Diversified natural and man-made background tourism elements (BTE): preservation and incorporation of concepts for development of tourism destinations.

*Prerequisites: take HT-140 and ECON-210*

### **HT-344 Hospitality and Tourism Marketing and Sales**

3 cr.

Repeatable for Credit: No

Analysis of marketing strategy, sales techniques, promotional tools, and research for hospitality and tourism development.

*Must be Junior level or higher*

### **HT-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **HT-350 Hospitality Diversity Management**

3 cr.

**Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Analysis of multiculturalism and diversity in the hotel, restaurant and tourism workplace. Managing a diverse workforce in a logical and meaningful manner through understanding self-perspectives, group identities, and workplace strategies.

*Must be Junior level or higher*

**HT-351 Hospitality Convention/Meeting Planning**

3 cr.

Repeatable for Credit: No

The roles and responsibilities of professional hospitality meeting planners and hotel convention sales/service managers are examined for purposes of planning or hosting a major convention, or a corporate, association, or special group meeting event.

*Prerequisite: take HT-344*

**HT-352 Club Management**

3 cr.

Repeatable for Credit: No

Managing a membership, city, health and fitness, military, golf, or other social or recreation club.

*Must be Junior level or higher*

**HT-360 Tourism for Persons with Disabilities**

3 cr.

Repeatable for Credit: No

Examination of the effectiveness of current legislation and initial strategies to purposely accommodate the needs and preferences of persons with disabilities to promote a more inclusive environment within the hospitality and tourism industry.

**HT-362 Foodservice Finance and Cost Control**

3 cr.

Repeatable for Credit: No

The use of financial techniques and systems to develop and analyze budgets, control food, beverage, and labor costs in foodservice operations.

*Prerequisite: take BUACT-206*

**HT-374 Principles of Timeshare Management**

3 cr.

Repeatable for Credit: No

Introduction to timeshare management; similarities and differences between timeshare operations and other hospitality businesses. Tourism influences on timeshare development.

### **HT-383 Yield Management**

3 cr.

Repeatable for Credit: No

Investigation of the use of computer technology in the lodging industry for revenue planning, scheduling and performance evaluation. Specialized software will be used to analyze and evaluate hotel performance.

*Prerequisites: take HT 235 , HT-200 and STAT 130*

### **HT-391 Principles of Social Media Marketing Management**

3 cr.

Repeatable for Credit: No

Review of social media marketing management and the impacts that social media has on marketing strategy, operational strategies, social technology business models, how the conversation economy impacts business, internal and external engagement practices, customer service and reputation management, along with privacy and legal considerations.

*Prerequisites: take HT-344 or BUMKG-330*

### **HT-396 Workshop in Recreation and Parks: Scotland's Public Spaces**

3 cr.

Repeatable for Credit: No

Introduction to wide range of public spaces and recreational facilities across Scotland and their use, such as public squares, botanical gardens, arboretums, and historical museums. Critical analysis of the site is introduced to determine whether the space was successfully designed to meet the needs of users.

### **HT-396A Social Media Marketing Management**

3 cr.

Repeatable for Credit: No

Social media marketing practices and management of the social media process. Focused on business models within social marketing, customer change impacting unit practices, social platform effectiveness, customer service and engagement, applications within hospitality and related services, privacy and legal considerations.

Must be Sophomore level or higher



### **HT-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HT-418 Casino Tourism**

3 cr.

Repeatable for Credit: No

Research/travel and visits with Chambers of Commerce, casino management personnel, and governing entities to study economic, sociological and cultural impacts of gaming within a particular global or local region. A special course fee applies.

*Prerequisites: take HT-315, HT-316, and HT-317*

### **HT-423 Wine and Food Pairing**

4 cr.

#### **Global Perspective**

Repeatable for Credit: No

Matching wine and food from different parts of the world using flavors, textures, and components present in food and wine as complementing strategies. Emphasis on menu planning, food preparation, cooking methods and wine tasting with foods. A special course fee applies.

*Prerequisite: take HT-326*

### **HT-426 Restaurant Operational Management**

3 cr.

Repeatable for Credit: No

Application of the principles of food and beverage management in full service restaurants existing as independent units or as units within a commercial/ noncommercial foodservice operation. The course will emphasize fine dining, fine cuisine and control systems.

*Prerequisite: take HT-324*

### **HT-430 Lodging Administration**

3 cr.

Repeatable for Credit: No

Analysis of theories, principles and techniques of lodging management; problems and issues encountered by management in providing quality service within cost-efficient organization.

*Prerequisite: Senior level and HT-383*

### **HT-440 Sociocultural Systems of Tourism**

3 cr.

Repeatable for Credit: No

Various psychosocial dimensions of tourism: motivation, development, community and conflict as related to consumer-tourists, tourists and residents.

*Must be Senior level or higher*

### **HT-442 Trade Show Management**

3 cr.

Repeatable for Credit: No

Investigate and apply the process and procedures to plan and manage a trade show from a developer and user perspective. Define the process to select and develop, arrange for site and support services leading to a profitable trade show.

*Prerequisite: take HT-351*

### **HT-445 Event Management**

3 cr.

Repeatable for Credit: No

Planning, organizing and the management of events will be investigated for the hospitality, tourism and golf industries. Emphasis is placed on the design, internal management systems and post event evaluation.

### **HT-447 International Convention and Meeting Management**

3 cr.

Repeatable for Credit: No

Investigate the process and procedures to plan for meetings in other countries.

*Prerequisite: take HT 351*

### **HT-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent  
*Must be Junior level or higher*

### **HT-450 Food Service Administration**

3 cr.

Repeatable for Credit: No

Organization and administration of institutional foodservice systems, personnel selection and training, cost control and problems of supervision.

### **HT-452 Hospitality Professionalism**

2 cr.

Repeatable for Credit: No

Prepare hotel, restaurant and tourism students as professionals in a global community. Role-play emphasis on professional dress, dining etiquette, culture and business conversation, job search and placement techniques.

*HRTM or Property Management Majors only*

### **HT-454 Security and Risk Management for the Hospitality Industry**

3 cr.

Repeatable for Credit: No

Advanced investigation of security and risk management within hospitality/service industries.

### **HT-457 Hospitality Management Strategies**

3 cr.

Repeatable for Credit: No

Comparison and synthesis of hospitality management strategies; concepts and theories in relationship to long-term hospitality business goals and objectives. Capstone course for senior-level H&T students.

*Prerequisite: Must be Senior level and take HT-362*

### **HT-460 Hospitality Industry Law and Liability**

3 cr.

Repeatable for Credit: No

Laws applicable to ownership and operation of inns, hotels, motels, restaurants and other places of public hospitality.

### **HT-461 Hospitality Employee Relations**

3 cr.

Repeatable for Credit: No

History and legal strategies and tactics in dealing with hospitality employees in both union and non-union settings.

### **HT-481 Special Problems in Hospitality and Tourism**

1-3 cr.

Repeatable for Credit: Yes

### **HT-490 Hospitality Capstone**

3 cr.

Repeatable for Credit: No

Project-based capstone for Hotel, Restaurant, and Tourism Management majors involving the integration and application of interdisciplinary management concepts, theories, and practices instrumental to management success within the hospitality and tourism industry.

Must be Senior level or higher

### **HT-492 Seminar in Hospitality and Tourism Management**

3 cr.

Repeatable for Credit: Yes

An advanced course in management. The student will select and research a current topic of importance to the industry. A special course fee applies.

### **HT-498 Hospitality & Tourism Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

Department Consent

*Must be Senior level or higher*

## **HT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Human Development and Family Studies**

### **HDFS-101 Introduction to Human Development and Family Studies**

1 cr.

Repeatable for Credit: No

Introduction to the academic program and professional field of Human Development and Family Studies. Program requirements, policies, and expectations. Overview of the family studies field and related knowledge and skills. Careers in the helping professions.

### **HDFS-115 Healthy Couple Relationships**

3 cr.

Repeatable for Credit: No

Intimate relationship development; characteristics of diverse committed relationships. Elements of healthy relationships and issues leading to relationship dissolution. topics include: self-awareness, communication, love, commitment, sexualities, sexual decision-making, partner selection, and relationship dysfunctions. Realistic expectations about intimate relationships.

### **HDFS-124 Human Development: Early Childhood**

3 cr.

Repeatable for Credit: No

Principles and theories of growth and development prenatal through age 8, with a systemic perspective on physical, motor, cognitive, language, social and emotional development. Observations required.

### **HDFS-195 Honors Seminar: Lifespan Human Development**

3 cr.

**Social and Behavioral Sciences - Psychology**

Repeatable for Credit: No

Review, discuss and analyze theories of human development across the lifespan.

### **HDFS-215 Dynamics of Family Development**

3 cr.

Repeatable for Credit: No

A study of the family with emphasis on environmental factors significant in marriage and family relationships.

### **HDFS-225 Skill Training for Individual/Family Interventions**

3 cr.

Repeatable for Credit: No

Concepts and skills in developing rapport, assessing goals and initiating change with children, parents, couples and families across the life span in professional settings.

### **HDFS-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Instructor's Consent Required

### **HDFS-255 Lifespan Human Development**

3 cr.

**Social and Behavioral Sciences - Psychology**

Repeatable for Credit: No

Lifespan individual development. Critical examination of influences on individual development across the lifespan.

### **HDFS-257 Lifespan Sexuality**

3 cr.

**Health and Physical Education - Health, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Introduction to human sexuality over the lifespan, utilizing an individual and family perspective. Development of sexual behavior, relationships, and gender characteristics from infancy to late life. Emphasis on ethical issues and implications of sexuality, gender and sexual orientation. Discussion of love and intimacy as key aspects of sexuality.

### **HDFS-264 Child Guidance**

3 cr.

Repeatable for Credit: No

Developmentally appropriate principles and strategies for child guidance. Systems perspective, positive discipline, theoretical approaches, current topics, developing a personal/eclectic approach.

*Prerequisite: take HDFS-124*

### **HDFS-270 Seminar on Self-Growth**

3 cr.

Repeatable for Credit: No

Course in personal growth and self-management. A starting point in working with families in a diverse world is to begin with an understanding of self. Learning strategies are aimed at bridging theory with real-life experiences.

### **HDFS-275 Race Matters: Interdisciplinary Investigations**

3 cr.

**Racial & Ethnic Studies Category A**

Repeatable for Credit: No

Application of cognitive and emotional skills to racial topics such as interpersonal relationships, media, and politics. Types of racism. How to talk about race. Antiracist strategies.

### **HDFS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HDFS-310 Family Stress, Coping and Adaptation**

1 cr.

Repeatable for Credit: No

Impact of family development and stress on individual and family well-being.

### **HDFS-313 Parent Education/Involvement**

2 cr.

Repeatable for Credit: No

Parent groups: training of leaders, survey of literature. Practicum with parent groups.

### **HDFS-320 Divorced, Single Parent and Remarried Family**

2 cr.

Repeatable for Credit: No

Trends and issues in divorce, single parenting and remarriage related to effects on adults, children and society.

### **HDFS-325 Human Development: Middle Childhood and Adolescence**

3 cr.

Repeatable for Credit: No

Empirical study of physical, intellectual, social and emotional development of children.

### **HDFS-330 Human Development: Early and Middle Adulthood**

3 cr.

Repeatable for Credit: No

Study of adults in the family context during the early and middle years.

### **HDFS-332 Death and Bereavement**

3 cr.

Repeatable for Credit: No

Significance of death and bereavement for the American culture, individual and family. Special consideration given to major tasks of grieving for children and adults.

### **HDFS-335 Critical Cultural Competence**

3 cr.

#### **Racial & Ethnic Studies Category A, Global Perspective**

Repeatable for Credit: No

Critical cultural competence and application to individuals and families. Systems of privilege and oppression. How socio-historical contexts shape interpersonal dynamics. Self-examination of cultural assumptions. Practice in critically thinking about difference and how to connect across differences.



### **HDFS-336 Practice in Critical Cultural Competence**

1 cr.

Repeatable for Credit: No

Practice of critical cultural competence skills in settings serving individuals and families. Working with and connecting across categories of difference to increase awareness, sensitivity, and understanding.

*Prerequisite: HDFS-335*

### **HDFS-340 Human Development: Late Adulthood**

3 cr.

Repeatable for Credit: No

Survey of the field of gerontology focusing on what it means to grow old in the United States from a systemic perspective.

Multicultural attitudes toward aging; the psychological, physical, social and economic needs and problems of the older population are addressed. Consideration will be given to the personal, familial, environmental and social resources of the older population.

*Prerequisite: take HDFS-215*

### **HDFS-341 Family Caregiving to Dependent Elders**

1 cr.

Repeatable for Credit: No

Unique challenges confronting adult children who provide care to aging parents. Government, agency, workplace and family policies and practices promoting and/or undermining family strengths and well-being.

### **HDFS-345 Health Care Dilemmas & Decisions for Families**

3 cr.

Repeatable for Credit: No

Bioethical issues facing U.S. families. Selected issues provoke deep and troubling questions that will be addressed from a multidisciplinary perspective through readings, student-led discussion, lectures, and case reviews.

### **HDFS-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.  
Instructor's Consent Required

### **HDFS-350 Women's Relationships in Later Life**

3 cr.

Repeatable for Credit: No

Women's experiences in later life. Impact of race, culture, class, sexual orientation upon aging. Images of aging women in contemporary literature and the media. Older women's experiences in familial relationships and friendships.

*Must be Junior level or higher*

### **HDFS-352 Sexual and Gender Identities in Families and Society**

3 cr.

**Contemporary Issues**

Repeatable for Credit: No

Introductory understanding of sexual and gender identities in families and society.

### **HDFS-353 Child Life Theory and Practice**

3 cr.

Theories and skills for effective child life practice in healthcare settings. Historical development of child life programming, impact of illness, injury and healthcare on a child and family, assessment, coping, preparation, therapeutic play, the therapeutic relationship and family-centered care.

### **HDFS-364 Sibling Relationships**

3 cr.

Repeatable for Credit: No

Seminar focusing on sibling relationships across the life course, examining the issues, processes and dynamics affecting these bonds.

*Must be Junior level or higher*

### **HDFS-365 Family Resource Management**

3 cr.

Repeatable for Credit: No

Individual and family use of resources to meet needs and attain goals. Critical evaluation of resource disparities and how families are impacted. Develop approach to working with diverse families and external systems on issues of resource management.

### **HDFS-370 Living with the Spectrum: Autism and Family Life**

3 cr.

Repeatable for Credit: No

Unique challenges, rewards, and family dynamics experienced by families impacted by autism spectrum disorder. Theoretical frameworks, life course and cultural considerations, ethical and policy issues, and implications for family practitioners.

### **HDFS-375 Grantsmanship for Nonprofits**

1-2 cr.

Repeatable for Credit: No

Explore the availability of foundation grant money for nonprofit organizations. Designed to give the beginning grant writer an overview of grant purposes, foundation funding sources, proposal development and writing.

### **HDFS-380 Case Management for Human Services**

3 cr.

Repeatable for Credit: No

Human services is generic for professional and paraprofessional jobs in diverse settings. Primary purpose of human services is to assist individuals and communities to function as effectively as possible. Introduction to historical context, theoretical perspectives, basic knowledge and beginning skills in case management.

*Prerequisite: take HDFS-225*

### **HDFS-395 Special Topics in Human Development**

1-2 cr.

Repeatable for Credit: Yes

Special topics in human development; repeatable for different topics.

*Must be Junior level or higher*

### **HDFS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **HDFS-401 Autism and Family Life: Living with the Spectrum**

1 cr.

Unique challenges, rewards, and family dynamics experienced by families impacted by autism spectrum disorder. Theoretical frameworks, life course and cultural considerations, ethical and policy issues, and implications for family practitioners.

### **HDFS-410 Families in an Electronic World**

3 cr.

#### **Contemporary Issues**

Repeatable for Credit: No

Effects of changes in communication technologies on family life over the past several decades. Impacts of television, computers, cell phones, and other communication technologies on daily life and family dynamics. Social issues stemming from technological advances and affecting family life including social networking, internet gaming, cybersex, cyber bullying, and the digital divide.

### **HDFS-420 Family Research and Methodology**

3 cr.

Repeatable for Credit: No

Analysis of family theory, research methodology and selected topics in family relations.

*Prerequisites: take HDFS-115 and HDFS-215*

### **HDFS-423 Spirituality Across the Lifespan**

2 cr.

Repeatable for Credit: No

Seminar discussion of autobiographical and biographical accounts of individual's spiritual experiences, beliefs and spiritual development over the life cycle.

*Must be Junior level or higher*

### **HDFS-426 Comparative Family Agencies - Ireland and U.S.**

3 cr.

Repeatable for Credit: No

A study abroad course designed to compare child and family agencies, human services providers, and mental health providers in Ireland with those in the U.S. Travel in Ireland, includes cultural immersion experiences.

### **HDFS-426 Special Topics in the Study of Family Life**

1-3 cr.

Repeatable for Credit: No

Family life programs and literature; individual study of problems of personal or professional interest.

### **HDFS-442 Geriatric Functional Assessment**

4 cr.

Repeatable for Credit: No

Multi-disciplinary assessment applied to elderly at critical transition points. Assessment of social and economic status, functional status (activities of daily living and instrumental activities of daily living), mental health, and environmental characteristics.

Explore various measurement instruments. Background check required.

*Prerequisite: take HDFS-340*

### **HDFS-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Instructor's Consent Required

### **HDFS-450 Family Policy**

3 cr.

Repeatable for Credit: No

Family policy and family perspective in policymaking. Reciprocal relationship between families and public policies. Family policy formation, implementation, evaluation and advocacy.

*Prerequisites: take HDFS-115 and HDFS-215*

### **HDFS-454 Suicide and the Family: Family and Community Intervention**

1 cr.

Repeatable for Credit: No

Analysis of attempted and completed suicides from an interdisciplinary perspective. Forms of intervention, with emphasis upon family therapy, are compared, contrasted, and evaluated for suitability.

*Prerequisite: take HDFS-215*

### **HDFS-456 Abuse and the Family**

3 cr.

Repeatable for Credit: No

Definition and analysis of types of abuse in family context. Interrelationship of victims, perpetrators, other family members, helping professionals, social context. Risk factors, effects, reporting and recovery.

*Prerequisites: take HDFS-115 and HDFS-215*

### **HDFS-460 Religious Diversity and the Workplace**

3 cr.

#### **Contemporary Issues**

Repeatable for Credit: No

Major world religions and some smaller religions, practices, similarities and differences within and between religions; implications of religious practices and beliefs for workplace settings

### **HDFS-490 Professional Issues: Human Development and Family Studies**

2 cr.

Repeatable for Credit: No

Issues related to professional development in areas of human development and family studies.

*Prerequisites: For HDFS majors only. Must have 2.5 GPA in professional core.*

### **HDFS-491 Internship in Human Development and Family Studies**

4-8 cr.

Repeatable for Credit: Yes

Internship experience in human development and family studies. Student will be placed in community agency or organization and supervised by site supervisor.

Department Consent

*Prerequisite: take HDFS-490; must have 2.5 GPA in the professional core and program director approval*

### **HDFS-497 Field Experience in Human Development and Family Studies**

2 cr.

Repeatable for Credit: No

Field experience related to human development and family studies skills and knowledge used in teaching wage-earning courses at secondary level.

Department Consent

### **HDFS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Industrial Management**

### **INMGT-100 Introduction to Management**

1 cr.

Repeatable for Credit: No

Survey of management focusing on changes, challenges, opportunities, and management's role in business and industry.

Management program advisement, course sequence and job opportunities.

*For B.S. in Management majors only.*

### **INMGT-120 Quality Concepts**

3 cr.

Repeatable for Credit: No

An introduction to quality, quality systems, and quality management through a survey of the various philosophies, principles, techniques and procedures used by various organizations and/or managers to assure customer satisfaction of product and/or service.

### **INMGT-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **INMGT-200 Production and Operations Management**

3 cr.

Repeatable for Credit: No

A broad analytical "systems" viewpoint is used to develop competency in product and services operations management decision-making and problem solving in a contemporary setting.

*Prerequisites: take STAT 130, STAT-320 or STAT-330*

### **INMGT-210 Service Operations Management**

3 cr.

Repeatable for Credit: No

Examination of the environment in which services operate. The design of service delivery systems is addressed from the perspective of both customer participation and operations efficiency.

### **INMGT-220 Service Quality Assurance**

3 cr.

Repeatable for Credit: No

Determination of goals, management systems, and implementation methodologies for all aspects of service organization quality assurance.

### **INMGT-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **INMGT-298 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department Consent

### **INMGT-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent



### **INMGT-300 Engineering Economy**

2-3 cr.

Repeatable for Credit: No

Source and application of funds: cost control, valuation, depreciation, replacement theory and taxation.

### **INMGT-301 Seminar**

1-2 cr.

Repeatable for Credit: Yes

(Title will reflect specific business or management content.) Current topics in business and industrial management to meet specific needs of students enrolled.

### **INMGT-302 Seminar**

1 cr.

Repeatable for Credit: No

Elements of time management, strategies and techniques in industrial and business environments. Analysis of time use by all levels of management.

### **INMGT-303 Introduction to Leadership Praxis**

1 cr.

Repeatable for Credit: No

Assessment of leadership skills/characteristics, leading to understanding of integrative leadership, and including increased capacity for civic engagement, social justice action, and ethical decision making.

### **INMGT-305 Resource Planning and Materials Management**

3 cr.

Repeatable for Credit: No

Principles and techniques for planning and managing materials and resources within organizations and throughout a supply chain. Topics covered include resource and material planning, forecasting, master planning, materials requirements planning, capacity management, purchasing, inventory management, distribution options, supply chain management, and various operational management techniques.

*Prerequisites: take INMGT-200, STAT 130, or STAT-320*

### **INMGT-314 Manufacturing Enterprise Practicum**

3 cr.

Repeatable for Credit: No

Creation, planning, organizing, directing, staffing and controlling of a value-added manufacturing enterprise, including supply chain management; manufacturing, marketing and distribution of a product.

### **INMGT-320 Quality Tools**

3 cr.

Repeatable for Credit: No

Practical and statistical quality control in design and use of Quality Assurance Programs: Quality Engineering, Manufacturing Quality Assurance and Product Quality Assurance.

*Prerequisite: take STAT 130*

### **INMGT-325 Quality Management**

3 cr.

Repeatable for Credit: No

Provides the managerial and technical knowledge necessary to prepare, document, manage, and evaluate quality systems from beginning design through system operation and post-delivery customer services within a product or service environment.

*Prerequisite: take INMGT-200 or INMGT-210 or INMGT-335*

### **INMGT-335 Lean Manufacturing Systems**

4 cr.

#### **Global Perspective**

Repeatable for Credit: No

Introduction to production/operations management and lean manufacturing system design for engineers. Emphasis is given to analysis and design of production systems, facility layout, and globalization.

*Prerequisite: take STAT-330*

### **INMGT-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **INMGT-350 Facilities Planning**

3 cr.

Repeatable for Credit: No

Study of facilities location, structure, and planning for efficient layout and material handling systems.

*Prerequisite: take INMGT 200*

### **INMGT-365 Project Management**

3 cr.

Repeatable for Credit: No

Planning, scheduling, and control of technical projects. Topics covered include activity identification, network diagrams, scheduling, PERT/CPM, cost analysis, resource management, and computer control.

### **INMGT-397 Field Experience**

1 cr.

Repeatable for Credit: No

Department Consent

### **INMGT-398 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department Consent

### **INMGT-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **INMGT-400 Organizational Leadership**

3 cr.

Repeatable for Credit: No

Addresses the leader's role in accomplishing organizational objectives through the management and development of followers.

Concepts of organizational and individual behavior serve as a foundation for the development of leadership skills such as communication, motivation, leading, team building, building credibility, and conflict management.

*Must be Senior level or higher*

### **INMGT-403 Leadership Praxis**

1 cr.

Repeatable for Credit: No

Synthesis of leadership skills/characteristics, leading to understanding of integrative leadership, and including increased capacity for civic engagement, social justice action, and ethical decision making.

*Prerequisites: Take INMGT-303*

### **INMGT-405 Resource Planning and Materials Management Practicum**

3 cr.

Repeatable for Credit: No

Provides students with specific skills in managerial techniques for planning, scheduling and controlling resources in manufacturing and service organizations. This course focuses on the first two of the five required APICS exams that lead to certification as a Certified in Production and Inventory Manager (CPIM).

*Prerequisite: take INMGT-305*

### **INMGT-410 Six Sigma Quality Improvement Methods**

3 cr.

Repeatable for Credit: No

Overview of Six Sigma quality improvement applications. Application of scientific methods to improve quality of products, service, processes, and management systems.

*Prerequisites: take INMGT-320 and INMGT-325*

### **INMGT-414 Leadership Practicum**

1 cr.

Repeatable for Credit: No

Practical application of leadership principles in an enterprise. Instructor's consent

*Prerequisites: Must be concurrently enrolled in INMGT-314 and obtain consent of instructor.*

### **INMGT-415 Inclusivity in Leadership**

3 cr.

#### **Racial & Ethnic Studies Category B**

Repeatable for Credit: No

An examination of leadership dynamics for but not limited to women, people of color and other underrepresented populations including approaches to leading, communicating, and developing inclusive organizations.

*Prerequisites: take SOC-110 and either INMGT-400 or BUMGT-304*

### **INMGT-416 People Process Culture**

3 cr.

Repeatable for Credit: No

A study of high performing people process culture organizations integrating sociology, applied psychology, and organization behavior subject matter areas.

*Prerequisites: take BUMGT-304, and take either PSYC-382 or INMGT-400*

### **INMGT-420 Quality Assurance-Practicum**

3 cr.

Repeatable for Credit: No

Application of principles and techniques learned in INMGT-320, as part of Professional Semester/ Manufacturing Laboratory.

*Prerequisites: take INMGT-320 and INMGT-325*

### **INMGT-422 Quality Engineering**

3 cr.

Repeatable for Credit: No

Practical and statistical engineering methods to improve quality and design in a manufacturing environment.

*STAT-330 or higher level Statistics*

### **INMGT-425 Planned Experimentation for Quality Improvement**

3 cr.

Repeatable for Credit: No

Quality improvement through planned experimentation that focuses on product realization activities which consist of new product design and formulation, manufacturing process development and improvement.

*Prerequisite: take INMGT-422*

### **INMGT-430 Employee Involvement: Work Teams**

2 cr.

Repeatable for Credit: No

Background and history of employee involvement, teams as a method of employee involvement, analysis of the advantages and disadvantages of different team structures and the planning processes used to implement team structures, analysis of situational variables used to help design the best team approach for an organization, the support systems needed to maintain teams, phases of team development, facilitation skills, and team problem-solving methods.

*Must be Senior level or higher*

### **INMGT-435 Facilities and Material Handling Systems Design**

2 cr.

Repeatable for Credit: No

Lean manufacturing facility design for engineers. Emphasis is given to product flow data collection and analysis, design of production systems, material handling systems, facility layout, and globalization.

### **INMGT-440 Lean Enterprise**

3 cr.

Repeatable for Credit: No

Principles of lean techniques, justification of lean systems, how lean systems are scheduled, and cost analysis of a lean environment.

*Prerequisite: take INMGT-200*

### **INMGT-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **INMGT-450 Maintenance Management**

3 cr.

Repeatable for Credit: No

Organization and management of fixed asset maintenance systems including organizational structures, work control systems, computerized maintenance management systems, preventative and predictive maintenance, energy systems analysis and human resource utilization.

### **INMGT-460 Industrial Management Capstone**

3 cr.

Repeatable for Credit: No

Principles and methods of analyzing and solving industrial problems; application through case studies, management games and special problems. Emphasis on emerging techniques and issues in industry.

*Must be Senior level or higher*

### **INMGT-462 Global Manufacturing Study Tour**

2-3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Visit global sites to understand the current state of product design, manufacturing, and distribution in both developed and developing countries. Learn how to develop supplier, manufacturing, and distribution systems in a global setting.

*Must be Senior level or higher*

### **INMGT-475 Advanced Project Management**

3 cr.

Repeatable for Credit: No

Advanced planning, control, and leadership of technical projects and programs. Topics covered include: project and program justification, project management maturity and methods, multiple project or portfolio management, project management in multinational cultures, virtual project teams, requirements definition, and outsourcing.

*Prerequisites: take INMGT-365 or AEC-471*

### **INMGT-489 Business and Industrial Intern**

1-8 cr.

Repeatable for Credit: Yes

Off-campus work and study in student's area of concentration; approved salaried position with cooperating company for a semester or summer session.

Department Consent

*Must be Junior level or higher*

### **INMGT-496 Innovation Management**

1 cr.

Repeatable for Credit: No

Self-paced study on innovation management to determine how to commercialize the student's new product innovation. Topics include intellectual property, market research, prototyping, and business plans.

### **INMGT-497 Field Experience**

1 cr.

Repeatable for Credit: No

Department Consent

### **INMGT-498 Field Experience**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department Consent

### **INMGT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Information and Communication Technologies**

### **CTE-370 Instructional Technology - Education and Training**

2 cr.

Repeatable for Credit: No

Technological applications to education, training and instruction. Emphasis on examining, developing and evaluating various technologies and their appropriateness for the curriculum and training applications.

### **ICT-100 Introduction to Information and Communication Technologies**



1 cr.

Repeatable for Credit: No

Survey of changes, challenges, opportunities in business and industry for the information and communication technologies professional. Program advisement, course sequence, career pathways and job opportunities.

*B.S. in Information and Communication Technologies majors only*

### **ICT-103 Information and Communication Technologies**

3 cr.

#### **Contemporary Issues, Global Perspective**

Repeatable for Credit: No

Basic technical concepts, principles, models, management and foundational logic of information and communication technologies (ICT). Examines history, current trends and future of ICT. Review of global ICT standards and regulations. Use of contemporary digital ICT for personal, educational and professional growth.

### **ICT-215 Cybertechnology Ethics**

3 cr.

#### **Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Cyberethics issues, framework for ethic complexities and nuances with information-technology globally including privacy, crime intellectual property, and internet regulation.

### **ICT-303 Information & Communication Technologies Essentials**

3 cr.

Repeatable for Credit: No

Components of computer hardware and operating systems, assembling a computer system, installing an operating system in a computer, and troubleshooting a computer using system tools and diagnostic software.

*Prerequisite: take ICT-103*

### **ICT-305 Information Systems for Enterprise**

3 cr.

Repeatable for Credit: No

Information systems concepts and technology for contemporary enterprise. Includes hardware, software, networks and enterprise-specific information systems. Emphasis on business-prudent solutions/products based on clearly identified needs/goals.

*Prerequisite: take ICT-103*

### **ICT-309 Collaborative Computing**

3 cr.

Repeatable for Credit: No

History application, design and analysis of collaborative computing.

*Prerequisite: take ICT-103*

### **ICT-311 Information and Communication Technologies Analytics**

3 cr.

Repeatable for Credit: No

Determine the value of electronic information and communications, developing metrics, determining return on investment on information and communication technologies.

*Prerequisite: take ICT-103*

### **ICT-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ICT-370 Computer-Assisted Interactive Video**

3 cr.

Repeatable for Credit: No

Design, production and evaluation of interactive video applications. Analysis of various hardware \and software systems.

Instructor's Consent Required

### **ICT-375 Web Production and Distribution**

3 cr.

Repeatable for Credit: No

Production and distribution of content to the World Wide Web. Consideration given to basic information architecture, standards, best practices, technologies, planning, implementation, management and distribution of digital content.

*Prerequisite: take either ICT-103 or CMG-151*

## **ICT-400 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics in media technology providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

## **ICT-401 Information Technology Policy And Audit**

3 cr.

### **Global Perspective**

Repeatable for Credit: No

Information technology policy, regulatory and audit issues, international standards, and internal security strategies.

*Prerequisites: take ICT-305 and BUACT-206*

## **ICT-405 Enterprise Technology Seminar**

3 cr.

Repeatable for Credit: No

Trends in enterprise technology, including: systematic development processes to solve business problems and support business processes, identification and use of contemporary enterprise technology solutions, sources of enterprise technology support, training and information and enterprise technology credentialing and career opportunities.

*Prerequisite: take ICT-401*

## **ICT-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **ICT-475 Dynamic Web Technologies**

3 cr.

Repeatable for Credit: No

Contemporary applications of technologies affecting adaptive user-centered web development as pertaining to content, presentation, scripting, variable data, markup languages, information architecture and analytics.

*Prerequisite: take ICT-375*

### **ICT-485 Search Engine Optimization**

3 cr.

Repeatable for Credit: No

Contemporary application of strategies and technology related to the improvement of placement in search engine and other relevant search results.

*Prerequisite: take ICT-375*

### **ICT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Information and Technology Management**

### **ITM-133 Networking Fundamentals I**

3 cr.

Repeatable for Credit: No

Internet Protocol addressing, routing and switching fundamentals.

### **ITM-134 Networking Fundamentals II**

3 cr.

Repeatable for Credit: No

Advanced addressing, switched networks, routing protocols, access lists and wide area network.

*Prerequisite: take ITM-133*

### **ITM-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ITM-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ITM-300 ITM Workshop: VMware Install, Configure, and Manage**

3 cr.

Repeatable for Credit: No

Installing, configuring, and managing VMware vSphere, including VMware, vSphere, ESXi, and VMware VCenter Server.

*Prerequisite: take ITM-133*

### **ITM-300 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics in graphic communications, providing hands on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **ITM-300 Workshop: Voice Mail & Unified Messaging**

3 cr.

Repeatable for Credit: No

Cisco Unity Connection architecture, components, functionality, and features. Implement and administer Cisco Unity Connection to create a unified workspace encompassing applications, devices, networks, and operating systems. Explore the various administration tools and reports available in Cisco Unity Connection.

### **ITM-308 Convergence Technologies**

3 cr.

Repeatable for Credit: No

Creation of single networks that support many different types of traffic: data, audio, video, and interactive multimedia. Planning physical design and installation of a telephone and converged system, requirements of a converged network, and what makes

convergence.

*Prerequisite: take ICT-103 and ITM-134*

### **ITM-330 IP Telephony Design & Implementation**

3 cr.

Repeatable for Credit: No

Internet protocol (IP) telephony components and protocols examination; converged network interpretation; analog and digital voice interface configuration; quality of service configuration; single and multisite IP telephony deployment; IP telephony features implementation.

*Prerequisites: take ITM-441*

### **ITM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ITM-361 Workstation And Server**

3 cr.

Repeatable for Credit: No

Installing, configuring, and administering Microsoft Windows utilizing the current commercial version of the product for both workstations and servers. Helps prepare students for two of the Microsoft Certified Systems Engineer (MCSE) certification examinations.

*Prerequisite: take ITM-134*

### **ITM-362 Server Applications**

3 cr.

Repeatable for Credit: No

Installing, configuring, and administering server applications using multiple industry standard operating systems. Server applications may include World Wide Web, FTP, software updates, mail, file sharing, DNS, DHCP, and terminal services.

*Prerequisite: take ITM-361*

### **ITM-363 Directory Services**

3 cr.

Repeatable for Credit: No

Provides knowledge and skills to plan, implement, and troubleshoot directory services. Design and implement a secure network.

Focuses on a directory services environment, including forest and domain structure, domain name system, site ology and replication, organizational unit structure, and delegation of administrations.

*Prerequisite: take ITM-361*

### **ITM-382 Network Systems Design**

3 cr.

Repeatable for Credit: No

Concepts from communication networks. LAN, MAN, WAN networks. Introduction to LAN switching, ATM and virtual LANS.

Designing and integration of LAN switching virtual networking and ATM into today's networks.

*Prerequisite: take ITM-134*

### **ITM-383 Introduction to Network Security**

3 cr.

Repeatable for Credit: No

Design, implementation and management of network security in multilayered computer networks. Identifying and evaluating network security threats; internet, intranet, and extranet security issues.

*Prerequisite: take ITM-134*

### **ITM-391 Wireless Systems**

3 cr.

Repeatable for Credit: No

Wireless networking combining Radio Frequency (RF) and Local Area Networking (LAN) technology fundamentals. Basic concepts and building blocks or the convergence between RF and networking technologies. Technologies and tasks vital to installing, managing, and supporting wireless networks.

*Prerequisite: take ITM-134*

### **ITM-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **ITM-441 Scalable Internetworks**

3 cr.

Repeatable for Credit: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Students will learn how to build scalable routable networks. Students are required to pass the associated Cisco certification examination.

*Prerequisite: take ITM-134*

### **ITM-442 Remote Access Networks**

3 cr.

Repeatable for Credit: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Students will learn how to build remote access networks to interconnect central sites to branch offices and home offices. Students are required to pass the associated Cisco certification examination.

*Prerequisite: take ITM-441*

### **ITM-443 Multi-Layer Switched Networks**

3 cr.

Repeatable for Credit: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Build multi-layer switched networks. Students are required to pass the associated Cisco certification examination.

*Prerequisite: take ITM-441*

### **ITM-444 Internetwork Troubleshooting**

3 cr.

Repeatable for Credit: No

Specialization course for the Cisco CCNP professional certification. Students will learn to troubleshoot internetworks. Students are required to pass the associated Cisco certification examination.

*Prerequisites: Take ITM-441 and ITM-443*

### **ITM-445 Internetwork Design**

3 cr.

Repeatable for Credit: No

Specialization course for the Cisco CCNP professional certification. Students will learn to design internetwork solutions. Students are required to pass the associated Cisco certification examination.

*Prerequisites: take ITM-441, ITM-442, and ITM-443*



### **ITM-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **ITM-450 Enterprise Solutions and Unified Communications**

3 cr.

Repeatable for Credit: No

Enterprise-level network utilizing the technologies and methods that are current industry best practices. Provide enterprise network solutions and unified communications to an organization while maintaining quality of service. New and emerging network technologies for an enterprise network.

*Prerequisites: take ITM-330, ITM-363, and ITM-444*

### **ITM-484 Advanced Network Security and Auditing**

3 cr.

Repeatable for Credit: No

Network infrastructure, operating systems, data centers, and virtualized environment security and auditing. Information technology government and industry regulation compliance.

*Prerequisites: take ITM-363, ITM-383, and ITM-443*

### **ITM-490 Information Technology Management Capstone**

3 cr.

Repeatable for Credit: No

Work with an outside organization in a team environment utilizing concepts of design, brainstorming, problem solving, team work, creativity, evaluation, and present findings in oral and written formats.

*Prerequisite: Take ITM-450*

### **ITM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes  
Department Consent

## **Literature**

### **LIT-203 American Poets**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Poetry of American writers: how culture, race, ethnicity, and nature shape American poetry.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-205 The Short Story**

3 cr.

#### **Literature, Contemporary Issues**

Repeatable for Credit: No

Style, structure, history and development of short story as a literary form.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-208 Fiction Into Film**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

A literary and cultural examination of film adaptations. Special attention is given to the evolving depiction of non-dominant racial and ethnic cultural groups in literature and film.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-230 American Cinema**

3 cr.

#### **Literature, Contemporary Issues, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

A literary and cultural examination of American cinematic development. Special attention is given to the evolving depiction of non-dominant cultural groups and contemporary issues. Examination of these issues allows students to actively discover, assess, and execute the creative problem-solving needed to be fully engaged with contemporary issues.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-255 Recent World Literature**

3 cr.

#### **Literature, Global Perspective**

Repeatable for Credit: No

Selected readings in Contemporary Literature in Translation.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-260 Modern American Literature**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Selected poetry, prose and drama produced since World War I.

*Prerequisite: take either ENGL 101 or ENGL 111*

### **LIT-265 Literature and Economics**

3 cr.

#### **Literature, Contemporary Issues**

Repeatable for Credit: No

Exploration of economic concepts and principles in literary works from a variety of periods. Application of literary and economic theory to novel-length texts.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-272 Women Writers**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B, Global Perspective**

Repeatable for Credit: No

Study of representative American and international women writers within the tradition of feminist literary theory.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-273 American Multicultural Literature**

3 cr.

#### **Literature, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

American multicultural literature, focusing on Hispanic, African, Asian, and Native American writers.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-275 Environmental Literature**

3 cr.

#### **Literature, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Literary and critical analysis of environmentalist discourses. Exploration of literary works that treat land use and co-existence among life forms.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-280 Best-Sellers**

3 cr.

#### **Literature**

Repeatable for Credit: No

Fiction and non-fiction best-sellers: expression of an impact on popular culture.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-281 Recent American Literature: Culture, Race, Ethnicity and Nature**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

How culture, race ethnicity, and nature shape American literature.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-285 Science Fiction**

3 cr.

#### **Literature**

Repeatable for Credit: No

Critical survey of popular and classic science fiction.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-300 Children's Literature**

3 cr.

**Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Critical survey and ways of presenting literature for children from infancy to age 12.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-301 English Literature**

3 cr.

**Literature**

Repeatable for Credit: No

Selected prose and poetry from 1798 to modern times.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-302 Topics in Literature**

1 cr.

**Literature**

Repeatable for Credit: Yes

Intensive analysis of selected authors and literary works with emphasis on discourse analysis in group and workshop settings.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-303 Coming of Age in Literature and Film**

3 cr.

**Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Exploration of literary and filmic works that treat age, coming of age, aging, and old age. Literary and critical analysis using age studies in literature.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-304 American Folklore**

3 cr.

#### **Literature, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Analysis and interpretation of stories, songs, jokes, and material culture of families, work groups, ethnic groups, and religious groups.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-306 Shakespeare**

3 cr.

#### **Literature**

Repeatable for Credit: No

Several representative plays and selected criticism.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-307 After 9/11: American Literature of Public Crisis and Trauma**

3 cr.

#### **Literature, Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Literary and cultural analysis of 9/11 and its aftermath in American and global contexts. Exploration of new racial formations, discourses of citizenship in the wake of trauma.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-308 Alice Walker: Beyond Purple**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

Explore Alice Walker's short stories, poetry, essays, children's literature, and novels. Consider Walker's writing in its social and historical contexts, particularly the civil rights, anti-Viet Nam war, and women's liberation movements, and connect those themes to contemporary issues.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-350 Modern British Literature**

3 cr.

**Literature, Global Perspective**

Repeatable for Credit: No

Selected poetry, prose, and fiction produced since World War I.

*Prerequisite: take either ENGL-101 or ENGL-111*

**LIT-396 Romantic Poets**

3 cr.

**Humanities and the Arts - Literature**

Repeatable for Credit: No

Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.

*Prerequisite: take either ENGL-101 or ENGL-111*

**LIT-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

*Prerequisite: take either ENGL-101 or ENGL-111*

**LIT-450 Experience in China: Modern East Asian Literature and Cinema**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Through the Experience China Study Abroad Program, this course introduces students to the cultural, social, political, and aesthetic developments in Modern East Asia through the study of major works of 20th and 21st century Chinese, Japanese, and Korean Literature and film. Includes study of memoirs, writings of political theory, sociology, religion, and history.

Department Consent

*Prerequisite: take either ENGL-101 or ENGL-111*

**LIT-450 Studies in Literature (Theme, Author, Genre)**

2-3 cr.

**Literature**

Repeatable for Credit: Yes

A study of a selected writer's work or of literature focusing on a significant theme of literature or of a genre not offered as a distinct course of similar duration within the departmental curriculum.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-450 Studies in Literature: Alice Walker: Beyond Purple**

2-3 cr.

#### **Humanities and the Arts - Literature**

Repeatable for Credit: Yes

Study of Alice Walker's short stories, essays, children's literature, poetry, and novels, making connections with the social and historical contexts, particularly the civil rights, anti-Viet Nam war, and women's liberation movements.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **LIT-450 Studies in Literature: Women's Autobiographical Writing: Private Lives, Public Stories**

3 cr.

#### **Humanities and the Arts - Literature**

Repeatable for Credit: Yes

Women's Autobiographical Writing: Private Lives, Public Stories: The changing contexts of women's lives and how women's actions have shaped and responded to those contexts as seen through women's autobiography. Rhetorical situations and consequences of various types of women's autobiography including autobiography using new medial such as blogging.

*ENGL-102 or ENGL-112*

### **LIT-450A Studies in Literature (Theme, Author, Genre)**

2-3 cr.

Repeatable for Credit: No

A study of a selected writer's work or of literature focusing on a significant theme of literature or of a genre not offered as a distinct course of similar duration within the departmental curriculum.

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-496 Films and Literature**

3 cr.

#### **Humanities and the Arts - Literature**

Repeatable for Credit: No

*Prerequisite: take either ENGL-101 or ENGL-111*

### **LIT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

*Prerequisite: take either ENGL-101 or ENGL-111*



## **Logic**

### **LOG-250 Critical Thinking**

3 cr.

Repeatable for Credit: No

Formulation, clarification and critical evaluation of claims: justification through non-formal argumentational strategies.

### **LOG-301 Introduction to Logical Thinking**

3 cr.

#### **Logic**

Repeatable for Credit: No

Problem-solving strategies based on induction and on categorical and propositional deduction.

### **LOG-305 Symbolic Logic**

3 cr.

Repeatable for Credit: No

Propositional and first-order quantificational languages and deductive systems, proof construction, introduction to soundness and completeness, application to natural language reasoning and computability.

### **LOG-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Manufacturing Engineering**

### **MFGE-275 Thermodynamics & Heat Transfer**

2 cr.

Repeatable for Credit: No

Application of thermodynamics and heat transfer fundamentals to the design and analysis of manufacturing processes and systems.

*Prerequisite: take PHYS-291 and MATH-250 (which may be taken concurrently)*

### **MFGE-325 Computer Aided Manufacturing for Manufacturing Engineers**

3 cr.

Repeatable for Credit: No

Effects of product mix and demand patterns on manufacturing system design and selection of process control methods.

Introduction to quick changeover strategies and reprogrammable automation including numerically controlled machine tools, robotics, group technology, CAD/CAM, automated inspection and other computerized processing techniques.

*Prerequisites: take ENGGR-210, and take MFGT-252 or MFGT-341*

### **MFGE-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MFGE-351 Manufacturing Process Engineering I**

3 cr.

Repeatable for Credit: No

Understanding, analysis, and control of machining and metal forming processes. Emphasis is given to process characteristics of heat transfer, process forces and pressures, and machine tool dynamics. Sheet metal designs utilizing solid modeling software.

*Prerequisites: take CHEM-341, MECH-294, MFGT-252, MFGE-275, and STAT-330*

### **MFGE-352 Manufacturing Process Engineering II**

3 cr.

Repeatable for Credit: No

Analysis of polymer, metal, and ceramic behavior in processing, through the understanding of structure-process-property relationships. Mathematical modeling of process design, incorporating heat transfer and non-Newtonian fluid mechanics.

*Prerequisites: take MFGT-251, MFGT-253, MECH-294, MFGE 391, and STAT-330*

### **MFGE-363 Controls and Instrumentation**

4 cr.

Repeatable for Credit: No

Programmable logic controllers, structured ladder logic developments, input/output module description, and interfacing with analog and digital sensors and actuators. Motion, temperature, pressure and flow sensors. Advantages of closed loop control, mathematical modeling of electric and mechanical systems, stability analysis and frequency response. Introduction to motion control.

*Prerequisites: take ELEC-290 and MATH-250*

### **MFGE-365 Control Theory**

2 cr.

Repeatable for Credit: No

Mathematical modeling of electrical and mechanical systems, stability analysis, and frequency response. Laplace transforms and transfer functions. Introduction to classical control theory. Controller design for stabilization and/or performance.

*Prerequisites: take ELEC-290 and MATH-250; not for students taking MFGE-363*

### **MFGE-391 Fluid Mechanics**

3 cr.

Repeatable for Credit: No

Fundamentals and engineering applications of fluid mechanics.

*Prerequisite: take MFGE-275*

### **MFGE-395 Seminar**

1-2 cr.

Repeatable for Credit: No

(Title will reflect specific manufacturing content.) Designed to upgrade effectiveness of teachers or secondary school manufacturing content.

### **MFGE-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MFGE-400 Intro to FAB Lab: How to Make Anything**

1 cr.

Repeatable for Credit: No

Introduction to personal digital fabrication using the UW-Stout Discovery Center BAB Lab, modeled after the FAB Lab at the Massachusetts Institute of Technology Center for Bits and Atoms. Use of laser cutters, 3-D printers, vinyl cutters, SHOPBot CNC routers, and desk milling machines and other digital and analog tools to fabricate and test design projects. Explore a variety of fields including graphic design, art, business, computer-assisted design, physical and natural science, mathematics, and engineering.

### **MFGE-400 Workshop:**

1-3 cr.

Repeatable for Credit: Yes

Special topics in manufacturing, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **MFGE-405 Capstone I: Concurrent Design**

3 cr.

Repeatable for Credit: No

Concurrent product design and development. Concept of design; brainstorming, problem solving, and creativity methods. Engineering methods. Design analysis, solid modeling, finite element analysis and information sources. Development of teamwork and communications skills. Consideration of cell needs and limitations.

*Prerequisites or Corequisites: take MFGE-351, MFGE-352, and MFGE-441*

### **MFGE-410 Capstone II: Manufacturing System Design**

3 cr.

Repeatable for Credit: No

Dedicated and flexible manufacturing systems through the design, building and testing of a flexible manufacturing cell that produces a discrete family of parts, design of part transfer, tooling, sensing, production control and integrated inspection systems will be emphasized.

*Prerequisite: Take MFGE-405; Prerequisites or corequisites: MFGE-325, MFGE-363, and MFGE-415*

### **MFGE-440 Manufacturing System Design and Simulation**

3 cr.

Repeatable for Credit: No

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of

technical reports summarizing projects.

*Prerequisite or Corequisite: take INMGT-335*

### **MFGE-441 Design Of Jigs, Fixtures, And Tooling**

3 cr.

Repeatable for Credit: No

Design of tooling used for machining, locating and transferring multiple parts for fixed and flexible manufacturing. Design, setup and development of tooling for robots, computer numerical control machines and other production equipment. Transfer line tooling.

*Prerequisites: MFGT-252, ENGGR-210, and MECH-294*

### **MFGE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MFGE-465 Reliability Engineering**

3 cr.

Repeatable for Credit: No

A practical introduction to reliability engineering with the opportunity for application. Topics covered include reliability need, calculations, prediction and modeling, and test design.

*Prerequisite: take STAT-330*

### **MFGE-490 Manufacturing System Design Problems**

1-3 cr.

Repeatable for Credit: No

Manufacturing system design through the application of previously learned principles and techniques. Issues to be addressed include: product design for manufacturability, process and tooling design and fabrication, system layout and equipment configuration, information and control architecture, implementation of quick-changeover strategies, task sequencing and scheduling, and simulation and evaluation of alternatives.

### **MFGE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Manufacturing Technology**

### **MFGT-110 Materials and Manufacturing Processes**

3 cr.

Repeatable for Credit: No

Manufacturing processes, material properties and their selection for product functions. Structure and characteristics of metal, polymer/wood, ceramic and composite materials will be examined.

### **MFGT-150 Introduction to Engineering Materials**

3 cr.

Repeatable for Credit: No

Exposure to engineering materials, their properties, and behavior. topics will include: material types, testing, mechanical properties, heat treatment, and material selection. Students are expected to have had H.S. chemistry.

*Math Placement  $\geq$  MATH-120, or MATH-150*

### **MFGT-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MFGT-202 Welding and Casting Processes**

3 cr.

Repeatable for Credit: No

Lab intensive class utilizing various processes and parameters in the welding and foundry areas.

*Prerequisite: take MFGT-110*

### **MFGT-203 Machining Metal Forming Processes**

3 cr.

Repeatable for Credit: No

Machine tool concepts providing an operational knowledge of traditional and non-traditional machining processes. Fundamental forming machine and hand tool operations. Sheet metal pattern development.

*Prerequisite: take MFGT-110*

### **MFGT-204 Polymer Processes**

3 cr.

Repeatable for Credit: No

Introduction to properties of plastic, elastomeric and fiber-reinforced composite materials and the processes used to manufacture products from them. Primary and secondary manufacturing processes used to convert wood-fiber materials into components and/or finished products.

*Prerequisite: take MFGT-110*

### **MFGT-250 Introduction to Plastics**

3 cr.

Repeatable for Credit: No

Examine basics of molecular structure, mechanical behavior, and rheological properties of plastics. Overview of plastics processing, new technologies related to processing, post-consumer-life, and introduction to ASTM/ISO standards used for testing and materials characterization.

*Prerequisite: take MFGT-150*

### **MFGT-251 Fundamentals of Plastics Materials and Processing**

3 cr.

Repeatable for Credit: No

Introduction to polymers, including their material, mechanical, and rheological properties. Process fundamentals including setup, operation, and troubleshooting of primary and secondary processes through a combination of classroom lectures and laboratory experiments. Introduction into analytical testing methods for characterizing polymers and analyzing defects and failures.

*Prerequisite: take MFGT-150 or MFGT-110 or PKG-220*

### **MFGT-252 Material Removal and Forming Processes**

3 cr.

Repeatable for Credit: No

Machine tool concepts providing an operational knowledge of machining and metal forming processes. Analysis and application of primary and secondary processing methods for the manufacture of products. Measurement principles and practice applied to

inspection and process control. Development of process designs appropriate for product specifications.

*Prerequisite: take either MFGT-150 or MFGT-110*

### **MFGT-253 Joining and Casting Processes**

3 cr.

Repeatable for Credit: No

Process concepts providing an operational knowledge of the practice and theory of welding, thermal cutting, adhesive bonding, and metal casting processes. Analysis and application of primary and secondary processing methods for the manufacture of products. Development of process designs and practices appropriate for product specifications, inspection and process control.

*Prerequisite: take either MFGT-150 or MFGT-110*

### **MFGT-303 Computer Aided Manufacturing**

3 cr.

Repeatable for Credit: No

Justification for and application of computer assistance in manufacturing process; machine process control, inventory and materials handling, robotics and automated assembly, product design and part grouping in relation to total manufacturing operation.

*Prerequisites: take MFGT-203 or MFGT-252, and take ENGGR-112 or AEC-131*

### **MFGT-315 Metallurgy**

3 cr.

Repeatable for Credit: No

Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrous alloys. Production, properties, and theory of the most important non-ferrous metals and alloys.

### **MFGT-330 Plastics for Teachers**

2 cr.

Repeatable for Credit: No

Overview of plastics as a manufacturing material. Focus on plastics processes: injection molding, blow molding, extrusion, thermoforming, and reinforced resin composites. Includes lab projects for the technology education classroom and tours to plastic processing industries.

### **MFGT-341 Injection Molding Technology**



3 cr.

Repeatable for Credit: No

Injection molding process parameters, part and tooling design, materials selection, quoting, rapid prototyping, troubleshooting, and cycle time reduction efforts. Laboratory experiments for understanding various technologies associated with injection molding of quality parts.

*Prerequisite: take either MFGT-250 or MFGT-251*

### **MFGT-342 Thermoform and Blow-Molding Technology**

3 cr.

Repeatable for Credit: No

Part/mold design, film/sheet forming techniques, methods of heating, sheet stretching and cooling, draw ratio calculations, materials selection, part thinning, and other aspects of thermoforming. Laboratory experiments for understanding various technologies associated with thermoforming and blow molding of quality parts, including tooling options, failure analysis, and product design.

*Prerequisite: take either MFGT-250 or MFGT-251*

### **MFGT-343 Extrusion Technology**

3 cr.

Repeatable for Credit: No

Extrusion and the various processes associated with extrusion; profile, flat film, blown film and die design. Laboratory experiments for understanding various technologies associated with extrusion of quality parts, including tooling options, failure analysis, and product design.

*Prerequisite: take either MFGT-250 or MFGT-251*

### **MFGT-345 Design and Simulation of Manufacturing Systems**

3 cr.

Repeatable for Credit: No

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of technical reports summarizing projects. Recommended: statistical knowledge.

*Prerequisites: take STAT 130, STAT 320 or STAT-330*

### **MFGT-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work

periods, each one building and expanding on the previous.  
Department Consent

### **MFGT-399 Independent Study**

1-3 cr.  
Repeatable for Credit: Yes  
Department Consent

### **MFGT-400 Workshop:**

1-3 cr.  
Repeatable for Credit: Yes  
Special Topics manufacturing, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **MFGT-405 Industrial Robotics**

3 cr.  
Repeatable for Credit: No  
Specifications, planning, purchasing decisions, and programming of industrial robots.  
*Prerequisites: take MECH-290 or PKG-350*

### **MFGT-449 Cooperative Education Experience**

1-8 cr.  
Repeatable for Credit: Yes  
Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.  
Department Consent

### **MFGT-497 Field Experience**

1-2 cr.  
Repeatable for Credit: No  
Department Consent

## **Marketing and Business Education**

### **MBE-101 Introduction to Marketing and Business Education**

3 cr.

Repeatable for Credit: No

Becoming a teacher in the disciplines of Marketing and Business Education (MBE) within K-12 schools, technical college, community colleges, and adult programs.

### **MBE-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department Consent

### **MBE-202 Supervision of MBE Career & Technical Student Organizations**

3 cr.

Repeatable for Credit: No

Competencies needed to become a successful advisor, integrate a marketing and/or business education career and technical student organization into curriculum with a focus on the high school division of BPA, FBLA, and DECA.

### **MBE-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department Consent

### **MBE-300 Introduction to Teaching Marketing and Business Education**

3 cr.

Repeatable for Credit: No

A study of becoming a teacher in the disciplines of Marketing and Business Education with a deep focus on their related career and technical student organizations.

### **MBE-301 Marketing and Business Methods and Formative Assessment**

4 cr.

Repeatable for Credit: No

Interpret marketing and business content structures; analyze and develop teaching and learning methods, procedures and activities; plan and demonstrate formative assessments.

*Prerequisites: Completion of Benchmark I and EDUC-303*

### **MBE-311 Marketing and Business Education Project Method**

2 cr.

Repeatable for Credit: No

Project method of instruction in a career and technical education program. Concurrent enrollment in MBE-312 is required.

*Prerequisite: take MBE-101; Corequisite: MBE-312; Benchmark I must be completed.*

### **MBE-312 MBE Pre-Student Teaching**

1 cr.

Repeatable for Credit: No

Design and deliver lessons at a PK-12 school district in conjunction with MBE-311.

*Prerequisite: MBE-101; Corequisite: MBE-311; Benchmark I must be completed*

### **MBE-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department Consent

### **MBE-355 Marketing and Business Seminar**

2-3 cr.

Repeatable for Credit: Yes

Issues and trends in marketing, business and career and technical education. Experiences necessary for success during student teaching and upon initial career entry.

### **MBE-365 Integrated Software Applications for Instruction**

3 cr.

Repeatable for Credit: No

Software applications for the professional and personal use of instructors. The effective use of word processing, spreadsheet, database, presentation, communication and other appropriate software applications with emphasis on curricular integration and professional standards.

*Prerequisite: take ICT-103*

### **MBE-366 Integrated Media Applications for Instruction**

3 cr.

Repeatable for Credit: No

Prepares instructors to use various media in the learning environment. Emphasis on proper curriculum integration based on sound curriculum design principles and professional standards. Instructor's consent

*Prerequisite: take MBE 365*

### **MBE-401 Marketing Education Curriculum**

2-3 cr.

Repeatable for Credit: No

Program, course and lesson-level curriculum development skills. Assessment systems, strategies, design elements, and test development skills.

*Prerequisites: take MBE-301, MBE-311, and MBE-312, and completion of Benchmark I*

### **MBE-409 Marketing Education - Student Teaching**

2-16 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

*Prerequisites: Benchmark II completion and MBE-401*

### **MBE-411 Business Education Methods and Curriculum**

5 cr.

Repeatable for Credit: No

Teaching methods and curriculum design for business educators. Emphasis on basic business subjects; business literacy and entry-level job preparation; issues and trends; demonstration and development of a standards-based business education curriculum.

*Prerequisite: Benchmark I completion*

### **MBE-412 Elementary Keyboarding Teaching Methods**

1 cr.

Repeatable for Credit: No

Developmentally appropriate methods of instruction in keyboarding and emerging input technologies applicable to elementary educational settings.

### **MBE-419 Business Education Student Teaching**

2-12 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools. Department consent

*Prerequisites: Benchmark II completion and MBE-411*

### **MBE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department Consent

### **MBE-488 Marketing Education-Internship**

8-16 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

*Prerequisites: Benchmark II completion and MBE-401*

### **MBE-489 Business Education Internship**

8-16 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

*Prerequisite: Benchmark II completion*

### **MBE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Mathematics**

### **MATH-10 Fundamentals of Algebra**

2 cr.

Repeatable for Credit: No

Review of fundamental principles of elementary algebra. Credit earned for MATH-010 will not count toward graduation. A special course fee applies.

### **MATH-110 Intermediate Algebra**

4 cr.

Repeatable for Credit: No

Basic algebraic skills: factoring, exponents, rational expressions, linear equations and inequalities, systems of equations, quadratic equations, and an introduction to functions. A special course fee applies.

*Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-10 or higher.*

### **MATH-118 Concepts of Mathematics**

4 cr.

#### **Mathematics**

Repeatable for Credit: No

Elementary concepts in mathematical language and reasoning, sets, number systems and theory, algebraic equations, statistics and probability, geometry, computers; historical survey. Students may incur incidental expenses for software.

*Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-10 or higher.*

## **MATH-120 Introductory College Mathematics I**

4 cr.

### **Mathematics**

Repeatable for Credit: No

Review of basic algebra, solving equations and inequalities, applications of equations and inequalities, functions and their graphs, polynomial equations, and systems of equations. Students may incur incidental expenses for software.

*Math Placement or MATH-110 required.*

## **MATH-121 Introductory College Mathematics II**

4 cr.

### **Mathematics**

Repeatable for Credit: No

Continuation of MATH-120. Study of functions to include rational, exponential, logarithmic, and trigonometric functions and two dimensional analytic geometry. Students may incur incidental expenses for software.

*Math Placement or MATH-120*

## **MATH-123 Finite Mathematics with Applications**

4 cr.

### **Mathematics**

Repeatable for Credit: No

Real number system, systems of linear equations and inequalities, sets, functions, vectors, matrices, probability, linear programming, theory of games, Markov chains. Students may incur incidental expenses for software.

*Math Placement Test, B- or better in MATH-110, or MATH-120 required*

## **MATH-150 Calculus with Precalculus A**

5 cr.

### **Mathematics**

Repeatable for Credit: No

First course in a two-course sequence. Review of basic algebra, solving equations and inequalities, graphing polynomial and rational functions. Limits and derivatives of polynomial and rational functions. Applications of derivatives.

*Math Placement or MATH-110 required.*

## **MATH-151 Calculus with Precalculus B**



5 cr.

**Mathematics**

Repeatable for Credit: No

Second course in a two-course sequence. Properties, identities, and derivatives of exponential, logarithmic, and trigonometric functions. Affine transformations and graphing, linear systems of equations, and geometric applications of trigonometry.

Integration and the Fundamental Theorem of Calculus.

*Prerequisite: Take MATH-150*

**MATH-153 Calculus I**

4 cr.

**Mathematics**

Repeatable for Credit: No

Functions, limits, continuity, bounds, sets; the derivative of functions and applications; exponential, logarithmic, trigonometric and inverse functions. Students may incur incidental expenses for software.

*Math placement score or MATH-121 required. Not open to students with credit in MATH-154, MATH-156, MATH-157, or MATH-158.*

**MATH-154 Calculus II**

4 cr.

**Mathematics**

Repeatable for Credit: No

Continuation of MATH-153: antiderivatives; integration theory and techniques, applications; parametric equations, vectors.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156*

**MATH-156 Calculus and Analytic Geometry I**

5 cr.

**Mathematics**

Repeatable for Credit: No

Review of real numbers, inequalities, absolute values, intervals and continuity; analytic geometry of the plane, limit concepts, derivatives of algebraic functions, definite integral.

*Math Placement Test or MATH-121 required.*

**MATH-157 Calculus and Analytic Geometry II**

5 cr.

**Analytic Reasoning - Mathematics**

Repeatable for Credit: No

Application of derivative and definite integral; conic sections and other algebraic curves; calculus for rational, algebraic, circular, exponential and trigonometric functions; formal integration.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156*

### **MATH-158 Calculus III**

3 cr.

Repeatable for Credit: No

Formal integration continued; parametric equations, polar representation, Cauchy's formula, Taylor's theorem, infinite series, vectors, partial differentiation, multiple integration.

*Prerequisite: take MATH-154 or MATH-157*

### **MATH-180 Foundations of the Language of Mathematics**

4 cr.

Repeatable for Credit: No

Conceptual foundations of mathematics and the language of mathematics. Logical rules of inference, statement forms, methods of proof, universal and existential quantifiers, abstraction and definition, set theory, relations, functions and cardinality. Proofs involving the above concepts and applications of the concepts and methods of proof to particular abstract mathematical objects.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156; not for students who took MATH-270*

### **MATH-196 Uncovering the Role Mathematics Plays in Everyday Life**

3 cr.

Repeatable for Credit: No

Investigation of mathematical concepts and algorithms that are used in everyday objects and technology. Concepts of fair division, identification numbers, information science, symmetry and patterns, and their applications. Offered for Wisconsin in Scotland program only.

### **MATH-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MATH-250 Differential Equations with Linear Algebra**

3 cr.

Repeatable for Credit: No

Differential equations: first-order and higher-order equations, systems of linear differential equations. Linear algebra: matrices, determinants, systems of linear equations, vector spaces, linear transformations, eigenvalues, eigenvectors.

*Prerequisite: take MATH-154 or MATH-157*

### **MATH-255 Differential Equations**

3 cr.

Repeatable for Credit: No

Common types of ordinary differential equations of first and second order; linear equations with constant coefficients; series solutions, numerical approximations, systems of ordinary equations.

*Prerequisites: take either MATH-154 or MATH-157, and take MATH-275*

### **MATH-262 Modern Geometry**

3 cr.

Repeatable for Credit: No

Development of logical discourse, betweenness properties and plane separation, geometric models of axiomatic systems, modern geometry of triangle and circle, transformations (linear, circular), orthogonal systems of circles, elliptic and hyperbolic geometry.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156*

### **MATH-270 Discrete Mathematics**

3 cr.

Repeatable for Credit: No

Exploration of sets, relations, functions, formal logic, proof techniques, counting techniques, graphs, recurrence relations, and generating functions. Applications in mathematics and computer science.

*Prerequisites: take either MATH-153 or MATH-156; not for students who took MATH-180*

### **MATH-275 Linear Algebra**

3 cr.

Repeatable for Credit: No

Algebra of linear transformations and matrices. Determinants, equivalence relations, rank systems of equations, vector spaces, orthogonal transformations, characteristic equations and quadratic forms.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156*

### **MATH-370 Modern Algebra I**

3 cr.

Repeatable for Credit: No

A first course in abstract algebra. Basic number theory, groups, subgroups, cyclic groups, permutation groups, factor and product groups, homomorphisms, isomorphisms, and an introduction to rings.

*Prerequisites: MATH-154 or MATH-157, MATH-180 or MATH-270, and MATH-275*

## **MATH-371 Modern Algebra II**

3 cr.

Repeatable for Credit: No

Continuation of MATH 370 . Rings, integral domains, fields, polynomials, groups, vector spaces, and field extensions. Advanced topics in abstract algebra.

*Prerequisite: take MATH 370*

## **MATH-450 Real Analysis I**

3 cr.

Repeatable for Credit: No

Rigorous development of advanced topics in analysis; functions, real numbers, sequences, Cartesian spaces, sequences of functions, limit superior and inferior, continuous functions.

*Prerequisite: take MATH-154 or MATH-157*

## **MATH-451 Real Analysis II**

3 cr.

Repeatable for Credit: No

Continuation of MATH 450; differentiation, integration, infinite series.

*Prerequisite: take MATH-450*

## **MATH-460 Complex Variables with Applications**

3 cr.

Repeatable for Credit: No

Complex numbers, analytic functions, elementary functions of complex variables, mapping of elementary functions, integration techniques, power series and calculus of residues.

*Prerequisite: take MATH-158*

## **MATH-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MSCS-380 Cryptography**

3 cr.

Repeatable for Credit: No

Classical and modern encryption methods, including both public-key and symmetric-key cryptosystems; elementary number theory; digital signature schemes and hash functions; introduction to (and countermeasures for) number-theoretic and algebraic cryptanalysis; discrete logarithms; applications to information assurance and cyber-security.

*Prerequisite: take MATH 370 and CS 145*

## **Mathematics Education**

### **MATHED-365 Mathematics Education Methods**

3 cr.

Repeatable for Credit: No

Content, curriculum, methods, materials, technology, standards and research used in the teaching of mathematics. Design of mathematics instruction for a variety of learners.

*Prerequisites: Take STMED-260; Concurrent enrollment in STMED-360 and EDUC-415*

### **MATHED-409 Mathematics Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in mathematics.

*Prerequisite: Benchmark II completion*

### **MATHED-488 Internship Teaching - Math Education**

81616

Repeatable for Credit: No

Alternative to student teaching experience: licensed and salaried internship in a cooperating school for one semester.

*Prerequisite: Benchmark II completion*

## **Mathematics, Statistics and Computer Science**

### **MSCS-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MSCS-192 Introductory Bioinformatics**

2 cr.

Repeatable for Credit: No

Introduction to the design, development, and application of bioinformatics tools for genomics and other integrated biological research questions. Some computer programming.

### **MSCS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MSCS-271 Formal Languages and Finite Automata**

3 cr.

Topics on the foundation of the theory of computation, including languages, grammars, regular expressions, finite state machines, Turing machines.

Prerequisites: Take CS 145 and take either MATH 180 or MATH 270

### **MSCS-280 Graph Theory with Applications in Computer Science**

3 cr.

Repeatable for Credit: No

Principles of graph theory, computer representation of graphs, properties of general graphs, structure and properties of special graphs, flow networks, and computer applications of graph theory.

*Prerequisites: Take CS-145 and take either MATH-180 or MATH-270*

### **MSCS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MSCS-390 Fourier Transform and Applications**

3 cr.

Repeatable for Credit: No

Fundamental theory of Fourier transform with applications to a variety of ics. Traditional definition of Fourier series, the modern functional definition of Fourier transform and its properties. Discrete and fast Fourier transform. Convolution and Shah-function and their applications to Fourier transform.

### **MSCS-390 Topics**

1-3 cr.

Repeatable for Credit: Yes

Topics of current importance in applications of mathematics to problems in business, industry, government or society. May be repeated for additional credit with consent of program director.

### **MSCS-390 Topics: Introduction to Parallel Processing with CUDA**

2 cr.

Repeatable for Credit: No

Introduction to parallel processing using the Compute Unified Device Architecture (CUDA) system. Overview of CUDA architecture, kernels, grids, threads, memory structure and performance considerations. Basic algorithms and examples of applications to computer graphics, image processing and scientific computing.

*Prerequisites: take CS-244 and MATH-275*

### **MSCS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MSCS-446 Numerical Analysis I**

3 cr.

Repeatable for Credit: No

Theory and applications of numerical methods for linear algebra, non-linear equations and polynomial interpolation.

*Prerequisites: take MATH-158, MATH-275 and CS-145*

### **MSCS-447 Numerical Analysis II**

3 cr.

Repeatable for Credit: No

Theory and applications of numerical methods for approximation, numerical integration and differentiation, differential equations, and Fourier analysis.

*Prerequisites: take MSCS-446 and MATH-255*

### **MSCS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MSCS-475 Applied Mathematics Internship**

2-8 cr.

Repeatable for Credit: Yes

Off-campus work and study in approved position to gain experience in using computer and/or statistical techniques in the analysis and solution of real-world problems. Interns receive salaried appointments with cooperating companies for summer or summer plus one semester.

Department Consent

*Must be Junior level or higher*

### **MSCS-492 Mathematical and Computational Foundations of Bioinformatics**



3 cr.

Repeatable for Credit: No

Examination of different types of algorithms employed in bioinformatics, their mathematical foundations, and software implementation. Topics in mapping DNA, sequencing DNA, comparing sequences, predicting genes, finding signals, identifying proteins, repeat analysis, DNA arrays, genome rearrangements, molecular evolution, phylogenetics, machine learning, systems biology, and computational biology.

*Prerequisites: must be Senior level and Applied Math & Computer Science major.*

## **MSCS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Military Science and Leadership**

### **MSL-101 Leadership and Personal Development**

1 cr.

Repeatable for Credit: No

Introduction to the Army profession and personal development of life skills such as critical thinking, ethical reasoning, goal setting, time management, physical fitness, and stress management. Off campus weekend leadership orientation in a military environment with outdoor physical activities, including land navigation and confidence course training.

### **MSL-102 Basic Leadership**

1 cr.

Repeatable for Credit: No

Establishes foundation of basic leadership fundamentals such as problem solving, communication, goal setting, and techniques for improving listening and speaking skills. Life skills are reinforced as well as an introduction to counseling and operations orders. Lab provides instruction on squad movement techniques, map reading, physical fitness and marching techniques.

### **MSL-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MSL-201 Foundations of Leadership**

2 cr.

Repeatable for Credit: No

Explores the dimensions of creative and innovative leadership strategies and styles by examining team dynamics and historical leadership theories. Students practice aspects of personal motivation, team building, and ethical reasoning in the context of planning, executing, and assessing team exercises and participating in leadership labs.

Instructor's Consent Required

*Prerequisite: take MSL-101*

### **MSL-202 Leadership and Teamwork**

2 cr.

#### **Health and Physical Education - Activity**

Repeatable for Credit: No

Examines building successful teams, methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem-solving process, and obtaining team cohesion through immediate feedback. The lab applies basic leadership theory and decision making during practical exercises in a field environment.

*Prerequisite: take MSL-102*

### **MSL-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MSL-301 Adaptive Team Leadership**

3 cr.

Repeatable for Credit: No

Students study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. Cadets practices planning, coordinating, and leading a team or squad during classroom PEs, Leadership Lab, and in a field environment.

Instructor's Consent Required

### **MSL-302 Leadership Under Fire**

3 cr.

Repeatable for Credit: No

The role of communication, value, and ethics in effective leadership. Ethical decision making, diversity, spirituality, and survey of Army leadership doctrine. Emphasis on improving oral and written communication abilities. Lab reinforces small-unit tactical training while employing troop-leading procedure to accomplish complex planning and decision making.

Instructor's Consent Required

### **MSL-350 Leader Development and Assessment Course Field Experience**

2 cr.

Repeatable for Credit: No

A 33-day ROTC training event designed to develop and evaluate leadership ability, including judgment, common sense, ingenuity and stamina. Perform complex tasks and make difficult decisions in demanding situations.

*Prerequisites: take MSL-301 and MSL-302*

### **MSL-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MSL-401 Adaptive Leadership**

3 cr.

Repeatable for Credit: No

Transitions the focus of student learning from being trained, mentored and evaluated to learning how to train, mentor, and evaluate underclassmen. Students learn the duties and responsibilities as a member of a staff and develop proficiency in risk management and reducing stress when planning, executing, and assessing training events.

Instructor's Consent Required

### **MSL-402 Leadership in a Complex World**

3 cr.

Repeatable for Credit: No

Study includes a case study analysis of military law and practical exercises on establishing an ethical command climate. Students must complete a semester-long Senior Leadership Project that requires them to plan, organize, collaborate, analyze, and demonstrate their leadership skills. The lab continues to sharpen the students' leadership skills.

Instructor's Consent Required

## **MSL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Music**

### **MUSIC-101 Class Piano I**

1 cr.

#### **Performing Arts**

Repeatable for Credit: No

Group instruction in piano technique and repertoire at beginner level. One one-hour lesson per week; additional practice time required.

### **MUSIC-112 Advanced Voice I**

1 cr.

Repeatable for Credit: No

Private instruction in vocal technique and repertoire. One 1/2-hour lesson per week; additional practice time required; optional recital.

Department Consent

### **MUSIC-120 Music Fundamentals**

3 cr.

#### **Arts and Humanities, Music Appreciation**

Repeatable for Credit: No

Introduction to the elements of music, with a focus on Western musical notation and theory. Notation, application, and practice of basic theory and music analysis skills.

### **MUSIC-130 Music Appreciation**

2 cr.

#### **Music Appreciation**

Repeatable for Credit: No

Music materials as they pertain to perceptive listening; music and musicians from medieval times to present; students gain significant awareness of great music. Students do not earn credit for both MUSIC-130 and MUSIC-132.

### **MUSIC-132 Music in Our World**

3 cr.

#### **Music Appreciation, Global Perspective**

Repeatable for Credit: No

Music materials as they pertain to perceptive listening; music and musicians from the beginnings of music to the present. Great music from many cultures. Students do not earn credit for both MUSIC-130 and MUSIC-132.

### **MUSIC-134 Rock Music History**

3 cr.

#### **RES-B, Arts and Humanities, Music Appreciation**

Repeatable for Credit: No

Characteristics and components: examination of a social music style, people who made the music, and its meaning for different groups in America and abroad.

### **MUSIC-201 Class Piano II**

1 cr.

#### **Performing Arts**

Repeatable for Credit: No

Continuation of MUSIC-101 at intermediate level. One one-hour lesson per week; additional practice time required.

### **MUSIC-206 Music for the Young Child**

2 cr.

Repeatable for Credit: No

Music elements and experience, methods and materials for guiding the musical growth of children from birth through third grade.

### **MUSIC-212 Advanced Voice II**

1 cr.

Repeatable for Credit: No

Continuation of MUSIC-112.

Department Consent

### **MUSIC-231 Honors Jazz History**

3 cr.

#### **Music Appreciation, Contemporary Issues, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

American jazz connections to changes in society: jazz origins and characteristics, a development of artists and styles, and a music's reflection of individual expression, race relations, and acceptance by society.

Honors Program Students or GPA 3.0 or better

### **MUSIC-236 Music in Media**

3 cr.

#### **Arts and Humanities, Music Appreciation**

Repeatable for Credit: No

Music as an art and enhancement to communication in entertainment, marketing, and social environments. How music is used to enhance the visual and the experience, affecting the mental and emotional state of individuals in society.

### **MUSIC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MUSIC-264 Jazz Band**

1 cr.

#### **Performing Arts**

Repeatable for Credit: Yes

Jazz styles and improvisation from the dance band era to the present. Study and performance of contemporary "big band" jazz.

Membership is open to all qualified students. Audition may be necessary. Repeatable for additional credit

Instructor's Consent Required

### **MUSIC-266 Concert Band**

1 cr.

**Performing Arts**

Repeatable for Credit: Yes

Fundamentals of musical expression, tone production and quality, and special problems of technique. Membership by audition only.

**MUSIC-267 Symphonic Singers**

1 cr.

**Performing Arts**

Repeatable for Credit: Yes

Advanced choral techniques, reading and analysis of choral music of all types and periods. A special course fee applies.

**MUSIC-268 Solo and Ensemble**

1 cr.

Repeatable for Credit: Yes

Coaching of advanced vocal and instrumental performers for public performance.

**MUSIC-269 Chamber Choir**

1 cr.

**Performing Arts, Arts and Humanities,**

Repeatable for Credit: No

Performance of advanced choral music with and without accompaniment, in a select choral ensemble. Enrollment is by audition only.

**MUSIC-270 Vocal Jazz Ensemble**

1 cr.

**Performing Arts**

Repeatable for Credit: Yes

Performance of vocal jazz in a select choral ensemble. Membership by audition only.

**MUSIC-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **MUSIC-300 Special Topics in Music**

3 cr.9 cr.

#### **Music Appreciation, Arts and Humanities**

Repeatable for Credit: Yes

Current issues or historical topics related to music. Specific topics will be advertised prior to the semester offered. Course is repeatable up to three times with different topics or issues.

### **MUSIC-312 Advanced Voice III**

1 cr.

Repeatable for Credit: Yes

Continuation of MUSIC-212.

Department Consent

### **MUSIC-320 Music Theory**

3 cr.

**Continuation of MUSIC-120; in-depth study of Western music theory through analysis and ear training.**

Repeatable for Credit: No

Current issues or historical topics related to music. Specific topics will be advertised prior to the semester offered. Course is repeatable up to three times with different topics or issues.

### **MUSIC-330 Survey of Western Music History**

3 cr.

#### **Music Appreciation, Arts and Humanities**

Repeatable for Credit: No

Significant compositions and composers that shaped Western music. Resulting period style characteristics, developments, and innovations that occurred from the medieval to modern and the role of music in society.

MUSIC 132 , MUSIC 134 , MUSIC 231 or MUSIC 236

### **MUSIC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work



periods, each one building and expanding on the previous.  
Department Consent

### **MUSIC-350 Digital Sound Studio**

3 cr.

Repeatable for Credit: No

Study and application of audio-visual synergy in animations, films, TV, games and other time-based multimedia forms.

Prerequisites: take DES 176 or PHOTO 330

### **MUSIC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **MUSIC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **THEA-332 The Directing and Acting Process**

3 cr.

**Arts and Humanities, Performing Arts**

Repeatable for Credit: No

Application of directing and acting methods. Script and character analysis and development. Applying principles of the director/actor relationship.

## **Nanoscience/Nanotechnology**

### **NANO-101 Exploration of Nanotechnology**

3 cr.

**GE Category: Analytic Reasoning & Natural Sciences, Contemporary Issues, Social Responsibility & Ethical Reasoning w/ Lab**

Repeatable for Credit: No

Discussion of the main concepts in nanoscience with an exploration of societal and environmental impacts.

*None*

### **NANO-110 Introduction to Vacuum Technology**

2 cr.

Repeatable for Credit: No

Principle concepts associated with vacuum technology and the critical components of a vacuum system. Basic vacuum system functions and characteristics. Lab course with a model vacuum system.

### **NANO-230 Characterization Methods of Nanomaterials**

3 cr.

Repeatable for Credit: No

Laboratory based course that covers basic techniques and theory of modern characterization methods of nanomaterials.

Techniques include: electron microscopy, scanning probe microscopy, diffraction spectroscopy, and emission spectroscopy.

*Prerequisites: take CHEM-341 and PHYS-282*

### **NANO-301 Nanostructures**

3 cr.

Repeatable for Credit: No

Introduction to nanostructured materials, theory of processes to design materials with nanostructure, and properties and behavior of nanostructured materials.

*Prerequisites: take NANO-101 and CHEM-341*

### **NANO-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **NANO-401 Nanotechnology Applications**

3 cr.

Repeatable for Credit: No

Review of current nanotechnology applications including societal effects.

*Prerequisite: take NANO-301*

## **Packaging**

### **PKG-100 Packaging and Society**

2 cr.

#### **Global Perspective**

Repeatable for Credit: No

A broad overview of the importance of packaging in society. Introduction to packaging and its interrelationship to multiple disciplines including impact on people and the environment.

### **PKG-150 Packaging Fundamentals**

3 cr.

Repeatable for Credit: No

Explore the purpose of packaging materials and manufacturing methods, including global perspectives, history, environment, market and consumer needs.

### **PKG-210 Packaging Materials: Paper, Wood, Adhesives, and Metal**

3 cr.

Repeatable for Credit: No

Technical exploration of paper, wood, adhesives and metal used in packaging worldwide. Material properties and international production processes, applications, environmental impacts of paper, wood, adhesives, and metal.

*Prerequisites: take PKG-150 and CHEM-135*

### **PKG-220 Packaging Materials: Polymers and Glass**

3 cr.

Repeatable for Credit: No

Technical exploration of polymers and glass used for packaging worldwide. Material properties, production processes,

applications, environmental impacts of polymers and glass.

*Prerequisites: take PKG-150 and CHEM-135, BS Packaging students only*

### **PKG-250 Consumer Packaging Systems**

3 cr.

Repeatable for Credit: No

The study of packaging from the design concept through production. Lab work on structural design, sample making, and machine operation. Discussions on standard packages and their applications.

*Prerequisites: take PKG-210 and PKG-220*

### **PKG-260 Distribution Packaging**

3 cr.

Repeatable for Credit: No

Packaging systems to support the distribution functions. Topics will include shipping containers, palletizing, unitizing, barrier problems, marking and coding for shipment, freight regulations, military specifications and hazardous materials regulations.

*Prerequisites: take PKG-210 and PKG-220*

### **PKG-335 Packaging Machinery**

3 cr.

Repeatable for Credit: No

Weighing, forming, filling, sealing, cartoning, capping, labeling, wrapping, casing, uncasing, palletizing/depalletizing machines as applies to the functional capabilities of speed, materials, containers, and operating functions.

*Prerequisites: take PKG-210 and PKG-220*

### **PKG-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PKG-350 Packaging Design and Evaluation**

3 cr.

Repeatable for Credit: No

Chemical and physical protection problems; materials, structure, graphics and regulations in package design; shock and vibration forces in package evaluation; practical applications of evaluation using electronic instrumentation.

*Prerequisites: take PKG-250 and PKG-260, and take PHYS-241 or PHYS-281*

### **PKG-385 Medical Packaging**

3 cr.

Repeatable for Credit: No

Practical knowledge of special requirements for medical devices and pharmaceuticals packaging. Discussion and evaluation of package systems, packaging procedures.

*Prerequisite: take PKG-250*

### **PKG-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PKG-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PKG-490 Packaging Development**

3 cr.

Repeatable for Credit: No

Applications of packaging functions: developing a product's complete packaging system, from final production of product to consumer.

*Prerequisites: take PKG-349 and PKG-350*

### **PKG-495 Packaging Seminar**

3 cr.

Repeatable for Credit: No

Current packaging problems or developments (subject based on students' interests and current issues).

*Prerequisites: PKG-349 and Senior Standing*

### **PKG-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Peace Studies**

### **PAX-201 Introduction to Applied Peace Studies**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

A general introduction to peace studies as an area of inquiry. The nature and dynamics of violent conflict, the conditions and practices of peace in its many forms, emphasis on peace building and nonviolent conflict transformation.

### **PAX-210 Nonviolence and the Civil Rights Movement**

3 cr.

#### **Contemporary Issues, Racial and Ethnic Studies Category A**

Repeatable for Credit: No

Introduction to theory and practice of nonviolence and its application in the American Civil Rights movement. Includes on-campus instruction and an experiential-learning excursion to significant locations linked to the Civil Rights movement.

### **PAX-251 Special Topics in Peace Studies**

1-3 cr.

Repeatable for Credit: Yes

Topics of current or historical importance in the understanding of peace and conflict. Designated topics announced prior to the start of the course. May be repeated for elective credit, but not more than twice for a total of 6 credits.

### **PAX-301 Conflict Analysis and Peacebuilding**

3 cr.

Repeatable for Credit: No

The study and practice of conflict resolution. An exploration of the origins and causes of conflict at multiple scales, how individuals and states act and react in situations of conflict, and practices and strategies for resolving conflict with an emphasis on nonviolence and peacebuilding.

*Prerequisite: take PAX-201*

### **PAX-401 Applied Peace Studies Seminar**

3 cr.

Repeatable for Credit: No

An analysis of beliefs and practices of peace. Students work to formulate their own ideas and positions and to develop critical arguments on peace theories by integrating the insights and arguments of a range of academic and popular sources on the subject. Culminates in a major peace-related research project.

*Prerequisite: take PAX-301*

## **Philosophy**

### **PHIL-201 Introduction to Philosophy**

3 cr.

**Philosophy, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Introduction to the principal problem areas and history of philosophy, as well as to the nature of philosophical investigation.

### **PHIL-205 Philosophy of Religion**

3 cr.

**Philosophy**

Repeatable for Credit: No

Principal philosophical problems in the various dimensions of religious experience and belief.

### **PHIL-215 Eastern Philosophy**

3 cr.

**Philosophy, Global Perspective**

Repeatable for Credit: No

Philosophies of India, China and Japan: Hinduism, Buddhism, Confucianism, Taoism and Zen Buddhism.

### **PHIL-220 Multicultural Philosophy**

3 cr.

#### **Philosophy**

Repeatable for Credit: No

African American, Hispanic American, Asian American, American Indian, and Feminist philosophies. Philosophical issues of race, social justice, values, environmental ethics, spiritual belief, and epistemology.

### **PHIL-225 Belief, Knowledge and Truth**

3 cr.

#### **Philosophy**

Repeatable for Credit: No

Justification of rational belief and knowledge and methods used for obtaining them, with particular emphasis on problems of evidence and truth.

*Prerequisites: ENGL 102 or ENGL-112 or ENGL-113*

### **PHIL-235 General Ethics**

3 cr.

#### **Philosophy, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Ethical valuing process: principal ethical theories and their application to common human problems.

*Prerequisites: ENGL-102 or ENGL-112 or ENGL-113*

### **PHIL-275 Business Ethics**

3 cr.

#### **Philosophy, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Ethical valuing process and major ethical standards applied to business contexts such as basic ethical perspectives on business ethics, the ethical basis of capitalism, the role of government regulation, corporate responsibility, professional and corporate ethical codes, product liability, marketing, global economics and international trade, property rights, and environmental sustainability.

### **PHIL-310 Philosophy of Mind**



3 cr.

Repeatable for Credit: No

Analysis of philosophical issues concerning the nature of mind, consciousness, and thought, and applications to cognitive science.

*Prerequisites: Take PHIL-201 or PHIL-225*

### **PHIL-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

## **Photography**

### **PHOTO-130 Introduction to Still and Moving Image Photography**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Introduction to the basic visual grammar and critical-thinking skills of still and moving image photography. Cinematic, photographic and visual theory will be addressed, with an emphasis on aesthetics, technical processes, and paradigms of visual literacy. Students will explore concepts, processes and techniques that are applicable to many disciplines. A DSLR camera with full manual control in still and video capture modes is required. A special course fee applies.

### **PHOTO-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PHOTO-204 Exploring Photography**

3 cr.

#### **Performing Arts**

Repeatable for Credit: No

Fundamentals of analog and digital photography with an emphasis on technical processes, principles of composition, aesthetics and paradigms of visual literacy. Students must provide a digital camera with a manually adjustable shutter and aperture.

## **PHOTO-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **PHOTO-305 Photo Processes**

3 cr.

Repeatable for Credit: No

Advanced monochromatic photography: aesthetics, advanced theory, view-camera techniques, studio lighting, materials and equipment selection, sheet-film processing, specialized processes and techniques. A special course fee applies.

*Prerequisite: take PHOTO-204*

## **PHOTO-310 Introduction to Photographic Lighting**

3 cr.

Repeatable for Credit: No

Introduction to the essential concepts of lighting for still and moving image photography. Emphasis is on the application and control of natural and artificial light in studio and location photography. A DSLR camera with full manual control in still and video capture modes is required.

*Prerequisite: take PHOTO 130*

## **PHOTO-311 Advertising and Public Relations Photography**

3 cr.

Repeatable for Credit: No

A survey of advertising and public relations photography trends and practices. The relationship between photography, typography and design, image capture, manipulation, file management, workflow, output, as well as identifying and meeting client needs and expectations are stressed. A digital SLR camera is required.

*Prerequisite: take PHOTO-204*

## **PHOTO-330 Introduction to Video Production**

3 cr.

Repeatable for Credit: No

Introduction to essential concepts and techniques of video production. Emphasis is placed on preproduction and preparation for production, writing proposals and treatments, story-boarding and developing a workflow appropriate to the project. Students develop camera operation, audio, lighting, directing, producing and editing skills. A DSLR camera with full manual controls in

still and video capture modes is required.

*Prerequisite: take PHOTO 130*

### **PHOTO-340 History of Photography**

3 cr.

Repeatable for Credit: No

Survey of the scientific and aesthetic development of photography from its beginnings to the recent practices of photographic technologies in the context of post-modernity. Examine the diversity of styles, techniques, methods, and ideologies of selected photographers focusing on their contributions and influences in advertising, art, fashion, communication technology and pop culture.

### **PHOTO-375 Product Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of still and moving image photography of manufactured goods and products. Emphasis is placed on photographing studio and table still life sets. The importance of lighting for scale, as well as lighting varied surfaces will be explored. A DSLR camera with full manual controls in still and video capture modes is required. A special course fee applies.

*Prerequisite: take PHOTO 130*

### **PHOTO-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PHOTO-411 Photojournalism and Documentary Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of photojournalism and documentary photography trends and practices. The importance of still and moving images as conveyors of information and influence on public opinion is emphasized. Ethical and moral considerations, freedom of the press and the public's right to know are stressed. A survey of the technical and conceptual aspects of still and moving image photography of manufactured goods and products. Emphasis is placed on photographing studio and table still life sets. The importance of lighting for scale, as well as lighting varied surfaces will be explored. A DSLR camera with full manual controls in still and video capture modes is required.

*Prerequisites: take PHOTO-310 and PHOTO-330*

### **PHOTO-412 Nature and Landscape Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of nature and landscape, still and moving image photography trends and practices. Emphasis on the application of appropriate techniques and equipment for field conditions. A special course fee applies. A DSLR camera with full manual controls in still and video capture modes is required.

*Prerequisites: take PHOTO-310 and PHOTO-330*

### **PHOTO-415 Advertising Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of still and moving image advertising photography trends and practices. The relationship between marketing, design and photography in communicating with target audiences through cross-channel media are stressed. A DSLR camera with full manual control in still and video capture modes is required. A special course fee applies.

*Prerequisite: take PHOTO-375*

### **PHOTO-421 Architectural and Interior Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of architectural and interior still and moving image photography trends and practices. Emphasis on the application of appropriate techniques and equipment for field/location conditions. A DSLR camera with full manual control in still and video capture modes is required.

*Prerequisites: take PHOTO-310 and PHOTO-330*

### **PHOTO-425 Corporate Communications and Public Relations Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of corporate communications and public relations, still and moving image photography trends and practices. The relationship between marketing, corporate communications and public relations photography in influencing target audience opinion through cross-channel media are stressed. A DSLR camera with full manual control in still and video capture modes is required.

*Prerequisites: take PHOTO-310 and PHOTO-330*

### **PHOTO-430 Video/Cinema Practicum**

3 cr.

Repeatable for Credit: No

Cross discipline teams explore a selected topic(s) through the completion of professional level video/cinema project(s), from concept to distribution digital media.

*Prerequisite: take PHOTO 330*

### **PHOTO-441 Fashion and Glamour Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of fashion and glamour still and moving image photography trends and practices. Emphasis on directing professional/non-professional talent/models and creative support and the importance of concept and design in creating effective images. A DSLR camera with full manual control in still and video capture modes is required. A special course fee applies.

*Prerequisites: take PHOTO-310 and PHOTO-330*

### **PHOTO-495 Professional Portfolio Development**

3 cr.

Repeatable for Credit: No

Capstone experience for the Applied Photography minor. Students fine tune their direction and concentrate on the area they intend to specialize in their professional career. Students design and produce a portfolio to be evaluated by representative professionals. Standards of professional practice are emphasized.

*Prerequisites: 18 credits of MEDIA courses*

### **PHOTO-499 Independent Study**

1-3 cr.

Repeatable for Credit: No

## **Physical Education**

### **PE-101 Aerobic Dance**

1 cr.

Repeatable for Credit: No

Introduction to aerobic dance as a technique for the development of physical fitness.

### **PE-103 Archery/Beginning**

1 cr.

Repeatable for Credit: No

Basic target archery shooting skills including tournament target archery, equipment selection and care, safe shooting behaviors. A special course fee applies.

### **PE-105 Bow Hunting**

1 cr.

Repeatable for Credit: No

Conservation, safety, selection and care of equipment; techniques and practical bow hunting experience. A special course fee applies.

### **PE-107 Badminton**

1 cr.

Repeatable for Credit: No

Emphasis on fundamental skills, terminology, rules, singles and doubles play for the game of badminton.

### **PE-109 Basketball**

1 cr.

Repeatable for Credit: Yes

### **PE-110 Bicycling**

1 cr.

Repeatable for Credit: No

Bicycling for health and fitness: safety, technique, and knowledge.

### **PE-113 Bowling**

1 cr.

Repeatable for Credit: No

A special course fee applies.

### **PE-115 Canoe Techniques**

1 cr.

Repeatable for Credit: No

Introduction to the skill of canoeing, including stroke techniques, water hydrology, equipment and safety.

### **PE-120 Self-Paced Personal Fitness**

1 cr.

Repeatable for Credit: No

Improvement of personal physical fitness through self-paced exercise programs and fitness activities.

### **PE-121 Exercise for Fitness**

1 cr.

Repeatable for Credit: No

Introduction to the importance, purpose, and mechanics of exercise for fitness.

### **PE-122 Fitness Yoga**

1 cr.

Repeatable for Credit: No

An introduction to yoga as a mind/body fitness practice.

### **PE-125 Fly Fishing**

1 cr.

Repeatable for Credit: No

Fly tying, casting techniques, literature, stream craft, equipment considerations, conservation ethics and natural resources stewardship.

### **PE-129 Golf**

1 cr.

Repeatable for Credit: No

Fundamental principles of golf; skills, history, etiquette and application of techniques. Required: play 27 holes of golf, pay greens fees, furnish 3 golf balls for class use. A special course fee applies.

### **PE-135 Walking/Jogging**

1 cr.

Repeatable for Credit: No

The study and practice of walking/jogging as an exercise philosophy, as an exercise technique and an exercise program.

### **PE-136 Ice Fishing**

1 cr.

Repeatable for Credit: No

An introduction to the sport of ice fishing.

### **PE-142 Outdoor Skills**

1 cr.

Repeatable for Credit: No

Introduction to the knowledge and skills of camping, outdoor skills, and backpacking. A special course fee applies.

### **PE-143 Rock Climbing**

1 cr.

Repeatable for Credit: No

Rock climbing as a recreational sport.

### **PE-144 Personal Defense**

1 cr.

Repeatable for Credit: No

Development of physical fitness for defense consciousness; techniques of initial and basic defense skills in weapon and rape attacks.



### **PE-145 Practicum in Intercollegiate Athletics**

1 cr.

Repeatable for Credit: Yes

Practical experience in intercollegiate athletics, including completion of a season as a member of an intercollegiate team.

Department Consent

*Prerequisite: take PE-200*

### **PE-146 Racquetball/Beginning**

1 cr.

Repeatable for Credit: No

Introduction to the fundamental skills, terminology, and rules for racquetball.

### **PE-148 Relaxation**

1 cr.

Repeatable for Credit: No

An introduction to the principles and skills of relaxation as applied in everyday life.

### **PE-150 Snowboarding**

1 cr.

Repeatable for Credit: No

An introduction to the skills and safety aspects basic to snowboarding.

### **PE-152 Skiing**

1 cr.

Repeatable for Credit: No

An introduction to the skills and safety aspects basic to the lifetime sport of downhill skiing.

Department Consent

### **PE-154 Fishing**

1 cr.

Repeatable for Credit: No

History, terminology, regulations, equipment and techniques involved in the recreational activity of fishing.

### **PE-155 Introduction to Curling**

1 cr.

Repeatable for Credit: No

Definition and application of curling terminology, history, etiquette, technique and strategy. Curling's interrelationship with mental and physical wellness, and professional opportunities. A special course fee applies.

### **PE-156 Soccer**

1 cr.

Repeatable for Credit: No

The development and improvement of the skills and tactics required in the sport of soccer.

### **PE-159 Softball**

1 cr.

Repeatable for Credit: No

The development and improvement of the skills required in the sport of softball.

### **PE-173 Skin and Scuba Diving**

1 cr.

Repeatable for Credit: No

Introduction to the principles and skill techniques of skin and scuba diving.

### **PE-176 Tennis/Beginning**

1 cr.

Repeatable for Credit: No

Emphasis on fundamental skills, terminology, rules, singles and doubles play for the game of tennis.

### **PE-182 Tumbling I**

1 cr.

Repeatable for Credit: No

An introduction to basic tumbling skills, including forward, backward, and sideward rotational skills as well as springing and vaulting movements from the hands and feet.

### **PE-183 Tumbling II**

1 cr.

Repeatable for Credit: No

Continued study of tumbling techniques including forward and backward rotational skills, twisting, and connections of rotational skills.

*Prerequisite: take PE-182*

### **PE-184 Tumbling III**

1 cr.

Repeatable for Credit: No

Continued study of tumbling techniques including multiple twisting and multiple flipping rotational skills.

*Prerequisite: take PE-183*

### **PE-185 Volleyball**

1 cr.

Repeatable for Credit: Yes

The application of techniques and rules of the game of volleyball.

### **PE-187 Weight Training**

1 cr.

Repeatable for Credit: No

Improvement of general physical strength and fitness using the overload method.

### **PE-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **PE-200 Orientation to Intercollegiate Athletics**

1 cr.

Repeatable for Credit: No

Introduction to intercollegiate athletics, including NCAA and conference regulations; current issues, such as professional sports, costs, drugs, Title IX, minority issues and ethics; components of athletic programs; physiology of exercise; and psychology of sport.

## **PE-201 Wellness and Social Responsibility**

3 cr.

### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Six dimensions of wellness, physical health, intellectual health, environmental health, social health, spiritual health, emotional health. Social responsibility of health: assess own health, create healthy lifestyle. Discuss health and ethically related issues, current trends, risks and benefits.

## **PE-202 Lifelong Fitness 2: League Sports**

3 cr.

### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Introduction to league sports played through adult years. Etiquette and rules, skills and strategies.

## **PE-203 Team Sports**

3 cr.

### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Introduction to team sports: skills and strategies, rules, etiquette, and ethics.

## **PE-204 Competition in the 21st Century**

3 cr.

### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Investigation into the contemporary issues and ethical considerations of Intercollegiate athletic competition. Topics will include sport governance, contemporary social issues, psychological aspects, and proper training.

### **PE-205 Lifelong Wellness: Biggest Loser Style**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Personal wellness through healthy lifestyle choices and physical activity.

### **PE-265 Physical Activities for Young Children**

2 cr.

Repeatable for Credit: No

Sequential development of physical perceptual skills in children, birth to age 5; perceptual motor activities that promote development.

### **PE-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PE-345 Basketball Officiating**

1 cr.

Repeatable for Credit: No

Rules and officiating techniques for men's and women's basketball; preparation for DGWS and/or WIAA officiating certifications.

### **PE-346 Football Officiating**

1 cr.

Repeatable for Credit: No

Application of football officiating rules and techniques.

### **PE-352 Theory and Management of Coaching**

2 cr.

Repeatable for Credit: No

Current management principles and practices applied to the profession of coaching.

### **PE-362 Psycho-Social Aspects of Athletics**

2 cr.

Repeatable for Credit: No

Examination of the psychology of sport and human movement. Understanding motivation, individual differences and social influence.

### **PE-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department consent

### **PE-401 Coaching Gymnastics**

2 cr.

Repeatable for Credit: No

Elements of gymnastic tumbling and use of gymnastic apparatus as part of a modern physical education program.

### **PE-460 Coaching Basketball**

2 cr.

Repeatable for Credit: No

Fundamentals and methods of teaching and coaching basketball, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

### **PE-461 Coaching Football**

2 cr.

Repeatable for Credit: No

Fundamentals and methods of teaching and coaching football, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

### **PE-470 Coaching Baseball**

2 cr.

Repeatable for Credit: No

Fundamentals and methods of teaching and coaching baseball, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

### **PE-471 Coaching Track and Field**

2 cr.

Repeatable for Credit: No

Fundamentals and methods of teaching and coaching track and field, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

### **PE-478 Coaching and Officiating Volleyball**

2 cr.

Repeatable for Credit: No

Skills and techniques of coaching and officiating competitive volleyball.

Instructor's Consent Required

*Prerequisite: take PE-185*

### **PE-480 Coaching Youth Athletes**

2 cr.

Repeatable for Credit: No

Coaching strategies for organized non-varsity youth sports programs--philosophy, psychology, physiology, pedagogy, prevention and care of injuries, and legalities.

### **PE-481 Coaching Hockey**

2 cr.

Repeatable for Credit: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive hockey skills and strategies; organizing and administering hockey programs at all age levels.

### **PE-482 Coaching Softball**

2 cr.

Repeatable for Credit: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive softball skills and strategies; organizing and administering softball programs at all age levels.

*Must be Sophomore level or higher*

### **PE-483 Coaching Soccer**

2 cr.

Repeatable for Credit: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive soccer skills and strategies; organizing and administering soccer programs at all age levels.

*Must be Sophomore level or higher*

### **PE-490 Practicum in Coaching**

1-3 cr.

Repeatable for Credit: No

On- or off-campus work and study in athletic coaching with competitive teams.

Department Consent

### **PE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Physics**

### **PHYS-150 The Nature and Application of Light and Color**

2 cr.

**Natural Science**

Repeatable for Credit: No



The nature of light and color: the basic principles of our visual perception of nature and the arts are presented for students with no formal background in science.

*Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-10 or higher.*

### **PHYS-151 Astronomy**

3 cr.

**Natural Science with Lab**

Repeatable for Credit: No

The solar system, stars, galaxies and the universe. Physical processes and observational methods.

### **PHYS-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PHYS-211 Introduction to Physics**

3 cr.

**Natural Science**

Repeatable for Credit: No

Introduction to principles of physics, including mechanics, fluids, heat and thermodynamics, light and sound, electricity and magnetism; their applications to specific technologies.

### **PHYS-212 Introduction to Physics: Lab**

1 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Measurement, analysis and presentation of laboratory data on basic physics concepts, including mechanics, fluids, heat, electricity, light and sound.

*Corequisite: PHYS-211*

### **PHYS-222 Thermodynamics and Renewable Energy**

3 cr.

Repeatable for Credit: No

Energy resources and the laws of thermodynamics with a focus on renewable energy as well as the technology required to harness and store it. Applications include photovoltaics, wind turbines, batteries, and solar ovens.

Prerequisite: MATH 121

### **PHYS-241 College Physics I**

5 cr.

#### **Natural Science with Lab**

Repeatable for Credit: No

Calculus-based general physics course: mechanics and thermodynamics with laboratory.

*Prerequisite: take either MATH-151, MATH-153 or MATH-156*

### **PHYS-242 College Physics II**

5 cr.

#### **Natural Science with Lab**

Repeatable for Credit: No

Calculus-based general physics course: electricity, sound, light and selected topics in modern physics with laboratory.

*Prerequisite: take PHYS-241*

### **PHYS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PHYS-250 The Physics of Light and Color**

3 cr.

#### **Natural Science with Lab**

Repeatable for Credit: No

Properties, sources and perception of light are examined through lectures and laboratory activity. Topics considered are: color systems and vision, optical devices and phenomena; and image formation and appearance.

*Prerequisite: Take any MATH 100-level or higher*

### **PHYS-251 Topics in Astronomy**

1 cr.

**Natural Science**

Repeatable for Credit: No

Qualitative analysis emphasizing physical principles of selected topics in astronomy. Significance of modern methods of obtaining astronomical information.

**PHYS-252 Neurophysics**

4 cr.

Repeatable for Credit: No

Examination of physical principles as they relate to brain function and neural systems. Exploration of the physics involved in techniques and technologies used in the study and imaging of the brain.

*Math Placement or MATH-120*

**PHYS-255 Meteorology**

2 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Physical processes that determine properties of the earth's atmosphere: precipitation, atmospheric circulation, weather, climate and human influence on the atmosphere in the framework of physics.

**PHYS-257 Introduction to Geology and Soil Mechanics**

3 cr.

Repeatable for Credit: No

Physical processes involved in rock formation, mountain building, erosional landscapes, plate tectonics, earthquakes and geologic dating. Elementary soil mechanics.

**PHYS-258 Introduction to Geology**

2 cr.

**Natural Science**

Repeatable for Credit: No

Composition of the earth and its physical processes, including geologic time, rocks and minerals, raw resources and energy, volcanism, earthquakes, streams and groundwater, weathering, glaciation, shorelines, deserts, wind, and planetary geology.

**PHYS-281 University Physics I**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Calculus-based general physics course: mechanics and thermodynamics with laboratory.

*Prerequisite: take either MATH-154 or MATH-157, or may be concurrently enrolled.*

**PHYS-282 University Physics II**

5 cr.

**Natural Science with Lab**

Repeatable for Credit: No

Calculus-based general physics course: electricity, sound, light, and selected topics in modern physics with laboratory.

*Prerequisite: take PHYS-281 or MECH-292*

**PHYS-283 Modern Physics**

3 cr.

Repeatable for Credit: No

Introduction to quantum mechanics and its applications to atomic structure, molecular bonds, lasers, properties of condensed matter, and the structure of the nucleus.

*Prerequisites: take PHYS-282*

**PHYS-291 Statics**

3 cr.

Repeatable for Credit: No

Essential elements of statics. Includes vector mechanics, coplanar and non-coplanar force systems, resultants, distributed loads, free-body diagrams, equilibrium conditions, trusses and frames, method of joints, method of sections, and force of inertia.

*Prerequisite or co-requisite: MATH-154 or concurrent enrollment*

**PHYS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**PHYS-301 Physics for Future Presidents**

3 cr.

**Natural Science, Global Perspective**

Repeatable for Credit: No

Science-related topics that a future president must master or any person interested in public policy matters with science content.

Terrorism, weapons of mass destruction, energy production, peak oil, nuclear power, radioactivity, environmental degradation, overpopulation, space, satellites, natural disasters, and pseudoscience.

**PHYS-321 Statics and Strength of Materials**

4 cr.

Repeatable for Credit: No

Force and moment equilibrium including friction, trusses, frames and machines. Simple and compound stress and strain including beams and joints.

*Prerequisite: take PHYS-241 or PHYS-281*

**PHYS-327 Solid State Physics**

3 cr.

Repeatable for Credit: No

Crystalline structure, lattice vibration and energy states, Brillouin zones, electrons in metals, semi-conductors, and dielectric and magnetic properties of solids.

*Prerequisites: take PHYS-282 or PHYS-242, and take MATH-157 or MATH-154*

**PHYS-329 Atomic and Nuclear Physics**

3 cr.

Repeatable for Credit: No

Elements of atomic and nuclear physics.

*Prerequisites: take PHYS-242 or PHYS-282, and take MATH-154 or MATH-157*

**PHYS-330 Science and the Fallible Mind for Educators**

2 cr.

Repeatable for Credit: No

Cross-disciplinary, physical science course primarily intended for educators. Defines and examines science with a perspective on societal issues related to the human mind, consumer marketing, psychology, religion, risk and fear, global concerns, and the use and abuse of numbers. H.S. Algebra required.

### **PHYS-333 Dynamics**

3 cr.

Repeatable for Credit: No

Essential elements of dynamics: rectilinear, angular and harmonic motions; forces producing motion, work, energy, acceleration, impulse and momentum.

### **PHYS-335 Applied Optics and Photonics**

3 cr.

Repeatable for Credit: No

Fundamentals of ray optics and wave optics, polarization of light, Fourier optics, fiber optics, lasers, semiconductor light sources and detectors.

*Prerequisites: take PHYS-282*

### **PHYS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PHYS-351 Astrophysics**

3 cr.

Repeatable for Credit: No

Quantitative and qualitative study of the solar system, stars, galaxies and the universe. Physical processes and observational methods and analysis.

*Prerequisite: take PHYS-242 or PHYS-282*

### **PHYS-358 Soil Science and Conservation**

4 cr.

Repeatable for Credit: No

Soil formation and the relationship of its physical, chemical, and biological properties to natural and agricultural ecosystems, with implications for sustainable management.

*Prerequisites: Take CHEM-135 and PHYS-258*

### **PHYS-360 Physics Modeling for Game Programmers**

3 cr.

Repeatable for Credit: No

Use of mathematics and physics to model the physical world for use in games and other computer simulations. Topics include motion, gravity, collisions, vectors, matrices, differential equations, dynamics, hydrostatics, hydrodynamics, and elastic systems to model common game objects.

*Prerequisites: take CS-244, MATH-275 and PHYS-281, and take either MATH-154 or MATH-157*

### **PHYS-383 Quantum Mechanics**

3 cr.

Repeatable for Credit: No

Develop theoretical framework for describing nanoscopic phenomena. Wave-particle duality, wave functions, Schrodinger's equation, quantized energy states, quantum tunneling, angular momentum and spin, time-dependent perturbation theory.

### **PHYS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PHYS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PHYS-458 Applied Watershed Hydrology**

4 cr.

Repeatable for Credit: No

Overview of the role of surface and groundwater flow in watersheds and how scientists study them including the impacts of anthropogenic activity and landscape characteristics on water quality at the watershed scale.

MATH 121 , CHEM 135 , and Junior or Senior status.

### **PHYS-489 Advanced Physics Experience**

1-3 cr.

Repeatable for Credit: Yes

Experience leading to a deeper understanding of principles and applications of physics.

Instructor's Consent Required

*Must be Junior level or higher*

### **PHYS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Plastics Engineering**

### **PLE-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PLE-305 Extrusion Theory and Applications**

3 cr.

Repeatable for Credit: No

Application of advanced theory in extrusion, extrusion blow molding, and thermoforming. Material specifications, part designs, die or mold designs, plasticating process and equipment, and control and monitoring systems will be emphasized.

*Prerequisites: take MFGT-250, MFGE-275 and ENGGR-210*

### **PLE-310 Injection Molding Theory, Design and Application**

3 cr.

Repeatable for Credit: No

Builds on basic injection molding knowledge with an emphasis on design, process cause and effect, troubleshooting, advanced



molding techniques, cycle time reduction efforts, thermal management techniques, and rapid prototyping.

*Prerequisites: take MFGT-341, MFGE-275, and ENGGR-210*

### **PLE-340 Process Simulation and Analysis**

3 cr.

Repeatable for Credit: No

Concepts of process modeling and simulation including rheological and thermal behavior of polymers during processing.

Practical applications are analyzed utilizing commercial simulation software.

*Prerequisites: take PLE-305 and PLE-310; Prerequisite or concurrent enrollment: MFGE 391*

### **PLE-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PLE-360 Testing and Analysis of Plastics**

3 cr.

Repeatable for Credit: No

Mechanical, rheological, and thermal properties of plastics. Theoretical principles are combined with laboratory experimentation to identify and characterize plastics in order to evaluate how the properties relate to processing and part performance.

*Prerequisites: take MFGE-275, MECH-294, and CHEM-325*

### **PLE-405 Capstone I: Process/Product Design**

3 cr.

Repeatable for Credit: No

Design of a product, process, and/or experiment(s) to perform a useful function or solve an industry-based or independent research problem related to plastics engineering. Requires knowledge in research, problem solving, teamwork, communication skills, project management, documentation, and experimentation.

*Corequisites: take PLE-340, PLE-360 and INMGT-422 concurrently.*

### **PLE-410 Capstone II: Process/Product Development**

3 cr.

Repeatable for Credit: No

A study of process and/or product development through 1) applied research and experimentation, or 2) the design, building, and testing of a product assembly, used to perform a useful function or solve an industry-based/independent research problem.

Process documentation and experimental analyses will be emphasized.

*Prerequisites: take PLE-405, MFGE-415 (prerequisite or corequisite), MFGE-363, and MFGE-325*

### **PLE-420 Transport Phenomena for Plastics Engineers**

3 cr.

Repeatable for Credit: No

Fluid dynamics and heat transfer applied to plastics processing. Plastic flow behavior as a non-Newtonian fluid with shear heating. Effects of operating conditions and mold/die design on filling behavior, cooling rates, and part characteristics. Finite difference and iterative calculations employed with comparison to fluid flow simulation software.

*Prerequisites: take MFGE-275, MFGE 391 , and PLE-340 or concurrent enrollment*

### **PLE-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PLE-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Political Science**

### **POLS-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **POLS-210 American Government**

3 cr.

#### **Racial & Ethnic Studies Category B, Social and Behavioral Sciences - Political Science**

Repeatable for Credit: No

Structures and processes of national, state and local government in the United States; constitutional framework, political theory and ideology, racial and ethnic dimensions of U.S. political culture, civil rights, media, voting, parties, elections, interest groups, and policy making. Comparisons with selected foreign governments.

### **POLS-220 State And Local Government**

3 cr.

Repeatable for Credit: No

State and local governments within U.S. federal system.

### **POLS-240 History and Politics of Africa**

3 cr.

#### **Contemporary Issues, Global Perspective, Humanities and the Arts - History, Social and Behavioral Sciences - Political Science**

Repeatable for Credit: No

Familiarity with cultures and civilizations of Africa, historical roots of modern situations. Emergence of human culture; traditional societies; colonialism and racism; regional persistence; independence and development; civil war and ethnic conflict; participation in a global economy.

### **POLS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **POLS-250 History of Race, Politics and Technology**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category A**

Repeatable for Credit: No

Historical and contemporary relationships between technology, assessments of technology impacts, studies of differing impacts upon distinct racial, ethnic and socioeconomic groups, and analysis of group differences in access to political and policy-oriented remedies.

### **POLS-260 Problems of U.S. Foreign Policy**

3 cr.

#### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Analysis of U.S. foreign policy objectives and decision making from both U.S. and foreign perspectives. Historical and contemporary problems of national defense, relationships with different regions and nations, economic and resource policies, presidential/Congressional authority, intelligence operations, and public opinion.

### **POLS-270 Introduction to Comparative Government**

3 cr.

#### **Global Perspective, Social and Behavioral Sciences - Political Science**

Repeatable for Credit: No

Analysis and comparison of basic political principles, institutions and problems of major Western, Communist and underdeveloped nations; consideration of alternative approaches to political order and change.

### **POLS-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **POLS-310 Political Parties and Elections**

3 cr.

Repeatable for Credit: No

Analysis of modern political parties. Nominating methods, campaigns, elections. Practical politics in legislative bodies; machines and bosses.

*Prerequisite: take POLS-210*

### **POLS-340 International Relations**

3 cr.

**Global Perspective, Social and Behavioral Sciences - Political Science**

Repeatable for Credit: No

The global political system; influence of technology, ideology, ethnicity, national interests, power, morality, multinational business, international organizations, and economic, demographic and ecological patterns; approaches to managing war, violence, economic relations, global pollution and other international problems.

**POLS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**POLS-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**POLS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**POLS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**Power**

## **POWER-103 Power Mechanics**

2 cr.

Repeatable for Credit: No

Internal and external combustion heat engines, mechanical and fluid transmission systems; present and future applications and limitations. Laboratory work emphasized.

## **POWER-260 Introduction to Fluid Power**

2 cr.

Repeatable for Credit: No

Basic fluid mechanics, pneumatics, hydraulics, control systems and common industrial circuits.

## **POWER-303 Mechanical Power Transmission**

3 cr.

Repeatable for Credit: No

Fundamentals of mechanical power transmission: theory of operation, selection of components, suggestions for application, and analysis of systems.

## **POWER-371 Mechatronics**

3 cr

Repeatable for Credit: No

Synergetic application of mechanical, electrical, and computer engineering as well as math and physics to create sophisticated electromechanical systems. Development of mechatronic systems to find an optimal balance between the mechanical structure, sensor and actuator implementation, automatic digital information processing, and overall control.

Prerequisite: take ELEC 204

## **Property Management**

### **PM-100 Introduction to Property Management**

2 cr.

Repeatable for Credit: No

Property management industry overview: types of residential and commercial property managed and career paths within the industry. Understanding relationships among property managers, owners and tenants.

### **PM-280 Hospitality Facilities Management**

3 cr.

Repeatable for Credit: No

Applied perspectives on responsible and efficient management of physical plant and equipment demands to achieve maximum guest and tenant satisfaction at acceptable operating costs.

*Must be Sophomore level or higher*

### **PM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **PM-358 Ethical Decision Making in Property Management**

3 cr.

Repeatable for Credit: No

Analysis of ethical decisions in property management. Case studies incorporating major laws impacting the property management industry; codes of ethics of major professional societies in property management.

### **PM-362 Real Estate Market Analysis and Investment Analysis**

3 cr.

Repeatable for Credit: No

Analytical tools used for decision making by property managers and the stakeholders they serve. Market and investment analysis and role in providing a financial perspective for the property manager and owner.

*Prerequisite: take BUACT-207*

### **PM-365 Principles of Real Estate**

3 cr.

Repeatable for Credit: No

Examine real estate issues relating to property ownership, financing, land use control, transferring interest in real estate through real estate contracts and deeds, leasing and managing property and understanding agents' pre-license and brokerage requirements.

### **PM-370 Principles of Property Management**

3 cr.

Repeatable for Credit: No

Management of commercial, multifamily and common interest development property. Employees, management tools, government involvement, client acquisition and tax requirements.

### **PM-371 Commercial/Residential Property Development and Management**

3 cr.

Repeatable for Credit: No

Exploring factors involved in developing and managing property, both residential and commercial, including undeveloped land. Topics include feasibility studies, financing, appraisal, leases, purchase agreements and management contracts.

*Prerequisite: take PM-370*

### **PM-381 Marketing and Leasing Commercial and Residential Property**

3 cr.

Repeatable for Credit: No

Effective marketing practices, leasing strategies and tactics designed to attract and retain qualified residential and commercial tenants to income producing properties.

*Prerequisite: take PM-370*

### **PM-391 Real Estate Appraisal**

3 cr.

Repeatable for Credit: No

Introduction to the concepts and practical application of real estate appraisal principles including real estate land economics, the three approaches to value applied to single family, multi-family, and commercial appraisal reports.

Must be Junior level or higher

### **PM-396 Valuation of Real Estate**

3 cr.

Repeatable for Credit: No

Concepts and practical application of real estate appraisal principles including real estate land economics, the three approaches to



value (cost, sales comparison, and income) for single family, multi-family and commercial investment properties.  
*Must be Junior level or higher*

### **PM-410 Issues in Multi-family Property Management**

3 cr.

Repeatable for Credit: No

An in-depth study of contemporary issues affecting multi-family property management. Issues including tax credit housing and conflict negotiation will be analyzed requiring a focus on critical thinking and writing skills.

Must be Senior level or higher

### **PM-430 Real Estate Law**

3 cr.

Repeatable for Credit: No

Legal relationships involved in real estate law including owning, leasing, managing and selling interests in real property.

*Prerequisite: take BULGL-365*

### **PM-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **PM-470 Seminar In Property Management**

4 cr.

Repeatable for Credit: No

Capstone course for Property Management. Preparation of a management plan in the context of a functioning marketplace.

Students will seek out and write a management plan that meets the format and content standards for professional accreditation.

*Prerequisite: take PM-370 and PM-362*

### **PM-496 Issues in Multi-family Property Management**

3 cr.

Repeatable for Credit: No

Contemporary issues affecting residential property management including tax credit housing.

### **PM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Psychology**

### **PSYC-100 Psychology Seminar I-Foundations**

2 cr.

Repeatable for Credit: No

Fields of study and careers in psychology with focus on development of skills, attitudes, ethics, and habits to successfully master those fields and pursue those careers.

### **PSYC-110 General Psychology**

3 cr.

#### **Social and Behavioral Sciences - Psychology**

Repeatable for Credit: No

Psychology as a discipline and an applied science. Scientific methodology applied to behavior and mental processes. Examines learning, memory, perception, motivation, development, individual and group differences, mental health, the physiological and cultural basis for behavior, and applies psychological principles to human experience.

### **PSYC-120 Psychology of Adjustment**

3 cr.

Repeatable for Credit: No

Principles, models and theories of psychology applied to understanding self, others, relationships and problems of contemporary life. Emphasis on healthy and effective personal and interpersonal life coping skills. Strategies and resources for confronting common life adjustment concerns.

### **PSYC-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

*Must be a Psychology major & have a 2.5 GPA*

### **PSYC-190 Psychological Research Methods**

4 cr.

Repeatable for Credit: No

An introduction to research methods used in the behavioral sciences. Lecture and laboratory activities involve applications of methodologies and computer technologies to understand and produce research compatible with American Psychological Association standards.

### **PSYC-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PSYC-210 Introduction to Applied Psychology**

3 cr.

Repeatable for Credit: No

Introduction to the application of psychological theories, methods of investigation, and research findings to a diverse spectrum of social problems. Emphasis is placed on the use of scientific psychology to improve aspects of everyday life.

*Prerequisite: Take PSYC-110*

### **PSYC-225 Psychology of Video Games**

3 cr.

**Social and Behavioral Sciences - Psychology**

Repeatable for Credit: No

Psychological aspects and impacts of video games. Theoretical factors of cognitive, learning, motivation, development, personality, social, and clinical psychology will be examined in relation to the experience and outcomes resulting from game play.

### **PSYC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

*Must be a Psychology major & have a 2.5 GPA*

### **PSYC-251 Child Psychology**

3 cr.

Repeatable for Credit: No

A study of the total psychological development of children emphasizing age groups spanning the pre-school and pre-pubescent child and methods for scientific measurement and understanding of child behavior.

*Prerequisite: Take PSYC-110*

### **PSYC-262D Manage Team Members, Consultant, and Technical Experts**

0.1 cr.

Repeatable for Credit: No

Discussion of methods appropriate for managing evaluation team members, consultants, and technical experts involved in a single evaluation.

### **PSYC-270 Social Cognition and Behavior**

3 cr.

Repeatable for Credit: No

Social factors affecting the behavior, thought processes, and attitudes of individuals. Includes attitude assessment and change, prejudice, interpersonal attraction, social influence, aggression, cognitive biases, and attributions.

*Prerequisite: Take PSYC-110*

### **PSYC-280 Forensic Psychology, Law and Ethics**

3 cr.

#### **Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Surveys the interface between psychology and law in relation to theoretical and applied cognitive, social, developmental and clinical areas. Psychologists' ethical responsibilities in improving legal, mental health, family and criminal law, and law enforcement domains included. Interventions for victims and offenders addressed. Cultural bias/fairness explored. Focuses on

United States.  
*Prerequisite: Take PSYC-110*

### **PSYC-281 Psychology for Sustainability**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Issues impacting environmental and societal sustainability. Factors influencing attitudes towards overconsumption, materialism, and nature. Psychological approaches to understanding and changing individuals, communities, and organizations to create a more sustainable world. Social and ethical imperatives for addressing sustainability.

*Prerequisite: take BIO-101 or BIO-111*

### **PSYC-290 Interpreting Psychological Research**

3 cr.

Repeatable for Credit: No

Interpretation and evaluation of quantitative statistical arguments presented in psychology- related journals, news, and political discourse; development of analytical and critical thinking skills related to statistical analyses and arguments; interpretation of APA style results sections, including correlation, regression, ANOVA, power and effect size.

*Prerequisites: take PSYC-110 and PSYC-190 and take STAT 130 or STAT-320*

### **PSYC-298 Psychology Field Experience**

2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department Consent

### **PSYC-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PSYC-300 Psychology Seminar II - Career Preparation**

1 cr.

Repeatable for Credit: No

Exploration of post-graduation options for psychology majors. Development of skills and knowledge for seeking postgraduate employment and/or graduate school admission.

*Prerequisites: Take PSYC-100 and PSYC-110*

### **PSYC-320 Psychology: Its History and Systems**

3 cr.

Repeatable for Credit: No

History of psychology and influence of early competing schools of thought: structuralism, functionalism, behaviorism, Gestalt psychology, and psychodynamic psychology. Evolution to present as a diverse behavioral science with emphasis on neobehaviorism, humanistic psychology, and cognitive psychology.

*Prerequisites: take 9 credits of PSYC, including PSYC-110*

### **PSYC-325 Psychology of Video Games**

3 cr.

Repeatable for Credit: No

Psychological factors involved in the development and use of video games. Theoretical and applied factors of cognitive, learning, motivation, development, personality, social, and clinical psychology will be examined.

### **PSYC-330 Psychology of Learning**

3 cr.

Repeatable for Credit: No

A course designed to acquaint the student with the principles of learning drawn from experimental and theoretical psychology. These principles are demonstrated as they apply to animal and human learning. Modern viewpoints toward theories of learning are emphasized.

### **PSYC-333 Drugs and the Brain**

3 cr.

Repeatable for Credit: No

Comparison of psychoactive drug classes, including drugs used for treatment of psychological disorders, recreational drugs, and illegal drugs, with focus on brain and behavior. Evaluation of role of psychological, biological, and sociological factors in drug use and abuse.

*Prerequisite: Take PSYC-110*

### **PSYC-335 Motivation and Emotion**

3 cr.

Repeatable for Credit: No

An experimentally oriented introduction to the fundamental principles of motivation and emotion.

*Prerequisites: take 9 credits of PSYC, including PSYC-110*

### **PSYC-340 Psychology of Individual and Group Differences**

3 cr.

Repeatable for Credit: No

Nature and extent of differences if individuals and groups are studied. Intelligence, achievement, aptitudes, interests, attitudes, and general personality are the major differences included. Race, sex, nationality, social class and age in relation to individual differences are studied.

*Prerequisites: PSYC-110 & 2 PSYC courses*

### **PSYC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

*Must be a Psychology major & have a 2.5 GPA*

### **PSYC-350 Culture and Psychology**

3 cr.

**Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Explores relationships among culture, behaviors and mental processes. Addresses cultural commonalities and differences in cognitive processes, such as perception, memory, and language; interpersonal processes such as marriage and childrearing; and mental health problems and treatments. Psychological perspectives on multicultural issues such as race, ethnicity, gender, and sexual orientation.

*Prerequisite: take either PSYC-110 or SOC-110 or ANTH-220*

### **PSYC-351 Children's Social Reasoning**

3 cr.

Repeatable for Credit: No

Focused, in-depth study of social reasoning from birth through late childhood. Empathy, friendship, altruism, multicultural perceptions, shyness, assertiveness, aggression, loneliness, morality, values, and global responsibility. Heredity/environment-based theories. Assessment tools and prevention and intervention programs. It is recommended that students will have taken one of the following courses: PSYC-251, HDFS-124, HDFS-264, or PSYC-270.

*Prerequisite: take PSYC-110*

### **PSYC-352 Adolescent Psychology**

3 cr.

Repeatable for Credit: No

The physical, emotional, social, moral, and intellectual development of secondary school youth.

*Prerequisite: Take PSYC-110*

### **PSYC-355 Clinical and Counseling Psychology**

3 cr.

Repeatable for Credit: No

Explores methods by which clinical and counseling psychologists assess and treat psychological problems and promote well-being, applying various psychological theories and research. Addresses similarities/differences of the mental health professions in philosophy, perspectives, typical career choices/duties, and training/licensure requirements. Discusses professional issues and specialty areas.

*Prerequisite: Take PSYC-110*

### **PSYC-360 Personality Theories and Applications**

3 cr.

Repeatable for Credit: No

Definition of personality and analysis of historical and contemporary approaches to the study of personality. Examines personality theories, personality assessment, cultural and other group difference impacts on personality, applications of personality, and personality self-assessment.

*Prerequisites: take 9 credits of PSYC, including PSYC-110*

### **PSYC-361 Abnormal Psychology**

3 cr.

Repeatable for Credit: No

Symptoms, causes, and treatment of various psychological disorders; historical changes in conceptualization and classification of psychological disorders; ethical, legal, and professional issues associated with psychological disorder diagnosis and treatment.



### **PSYC-370 Interpersonal Effectiveness Training**

3 cr.

Repeatable for Credit: No

Training in effective interpersonal communication attitudes and skills for creating healthy relationships including self-awareness/self-expression; understanding others' communication; assertive rights/responsibilities coping with difficult emotions; conflict management/resolution and mediation; collaborative problem solving and teamwork; gender differences in communication style; effectiveness in relationships with culturally diverse individuals; and effectiveness in online relationships.

### **PSYC-371 Introduction to Health Psychology**

3 cr.

Repeatable for Credit: No

Principles of psychology applied to the promotion of health and wellness; prevention of disease, injury and premature death; psychological treatment of illness; improvement of health care; and formation of health policies.

*Prerequisites: must have 10 credits in PSYC courses*

### **PSYC-372 Psychology of Sex and Gender**

3 cr.

Repeatable for Credit: No

Differences and similarities between females and males; psychosocial implications on personal and political status and the resulting influence on identity and self-concept.

### **PSYC-375 The Psychology of Marriage and The Family**

2 cr.

Repeatable for Credit: No

A study of the interpersonal relations involved in dating, mating and family collaboration with growing awareness of patterns for self-integration.

### **PSYC-377 Consumer Psychology**

3 cr.

Repeatable for Credit: No

Psychological principles and theories from the areas of motivation, perception, learning, attitude, information processing, personality, groups, organizational psychology, and environmental psychology are applied to the understanding of consumer behavior, consumer problems, and their solution.

*Prerequisite: Take PSYC-110*

### **PSYC-379 Public Relations**

2 cr.

Repeatable for Credit: No

Introduction to public relations in industry and education including community relations, employee relations, customer relations, media relations, tools of public relations, two-way communications, and special publics.

### **PSYC-381 Industrial/Organizational Psychology**

3 cr.

Repeatable for Credit: No

Principles of industrial and organizational psychology with emphases on assessment of individual differences in cognitive, physical and interpersonal abilities as they relate to measurement of work performance, employee selection, training and development methods, and development of organizational methods for improved motivation, job satisfaction, leadership and organizational effectiveness.

*Prerequisite: Take PSYC-110*

### **PSYC-382 Human Resource Management**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Organization and coordination of personnel practices and methods. Consideration given to communication, employment, orientation and training, working conditions, supervision, performance evaluation, collective bargaining, salary administration, health and recreation of a diverse work force employed in domestic and international settings.

### **PSYC-390 Experimental Psychology**

4 cr.

Repeatable for Credit: No

Experimental research methods used in basic and applied areas of psychology. Methodological issues introduced in context of actual research problems for integrated treatment of content and methodology. Students will apply this knowledge by participating in laboratory activities and designing and conducting their own experiments.

*Prerequisites: take STAT 130 (or higher) and PSYC-190*

### **PSYC-391 Applied Psychophysiological Methods**

3 cr.

Repeatable for Credit: No

Theory, methods, laboratory procedures, and applications of physiological responses to psychological stimuli.

*Prerequisite: take BIO-132*

### **PSYC-398 Psychology Field Experience**

2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department Consent

### **PSYC-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **PSYC-401 Workshop: Special Topics in Psychology**

1-3 cr.

Repeatable for Credit: Yes

Current specialized topics studied in a small group setting utilizing experimental activities.

Instructor's Consent Required

### **PSYC-403 Management of Employee Reward Systems**

3 cr.

Repeatable for Credit: No

Review of issues in the reward and compensation of employees and of systematic methods for the determination of employee wages, incentives and benefits. Psychological theories of motivation, external equity, job analysis, identifying compensable factors used in job evaluation, comparable worth and performance appraisal, individual salary determination.

*Prerequisite: take PSYC-382*

### **PSYC-432 Perception**

3 cr.

Repeatable for Credit: No

This course serves as an introduction to human perception. The content of the course is structured around an information processing model, with the sensory and memory facilities considered as information systems. The student will analyze perceptual research, become familiar with classical and modern psychophysical techniques and conduct experimentation in human information processing.

### **PSYC-442 Cognitive Processes**

3 cr.

Repeatable for Credit: No

Cognitive theories of attention, memory, language, reasoning and problem solving with applications to fields of education, vocational rehabilitation, gerontology, forensic, clinical and counseling psychology.

*Prerequisite: Take PSYC-110*

### **PSYC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

*Must be a Psychology major & have a 2.5 GPA*

### **PSYC-451 Children's Learning**

3 cr.

Repeatable for Credit: No

Psychological study of basic learning processes in infants and young children. How and why learning occurs and how the course of learning can be modified; discussed from theoretical, research, and practical orientations including simple behavioral responses, concepts and language.

*Prerequisite: Take PSYC-110*

### **PSYC-470 Social Influence**

3 cr.

Repeatable for Credit: No

Types of social influence and analysis of historical and contemporary approaches to the study of social influence. Techniques and impact of social influence in everyday life and resistance to unwanted social influence.

*Prerequisite: take PSYC-110*

### **PSYC-480 Individual Research Project I**

1 cr.

Repeatable for Credit: Yes

Preliminaries of active research through the development of a research proposal which includes the problem statement, review of the literature and the design of the research project.

Department Consent

*Prerequisites: take PKG-210 and PSYC-390*

### **PSYC-481 Individual Research Project II**

1 cr.

Repeatable for Credit: Yes

Research in a personal area of interest within the behavioral sciences. Requirements include the completion of a research report which meets APA guidelines.

Department Consent

*Prerequisite: take PSYC-480*

### **PSYC-485 Recruitment & Selection of Human Resources**

3 cr.

Repeatable for Credit: No

In-depth examination of the processes involved in the design and implementation of procedures for selecting employees; the impact these procedures have on the organization; and recruitment, job analysis, testing methods, legal issues, selection strategies, career development.

*Prerequisite: take PSYC-382*

### **PSYC-498 Psychology Field Experience**

2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department Consent

### **PSYC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Reading Education**

### **RDGED-382 Content Area Reading**

2 cr.

Repeatable for Credit: No

Theoretical foundations, policy and issues impacting content area reading. Evidence based strategies for assessing and building background knowledge, developing vocabulary and comprehension, integrating writing, selecting appropriate content area texts and materials, assessing students' reading ability, and addressing needs of diverse students and struggling readers.

*Prerequisites: Completion of Benchmark I and EDUC-303*

### **RDGED-414 Literacy Instruction and Assessment in the Primary Grades**

5 cr.

Repeatable for Credit: No

Balanced approach to scientifically based literacy instruction in the primary grades to include theoretical frameworks of literacy learning, program organization, effective instructional strategies, assessments, and informal evaluation techniques as related to instructional planning. Phonemic awareness, phonics, word study, fluency, comprehension, and vocabulary instruction.

*Prerequisites for BS ECE students: ECE-421, ECE-435, and ECE-480 Prerequisites for BS Spec Ed students: completion of Benchmark I*

## **Research and Development**

### **RD-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RD-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **RD-205 Design for Industry**

3 cr.

Repeatable for Credit: No

Industrial Research and Development experiences focusing on problems related to product development, innovation and problem solving, manual, semi-automatic and automatic production processes. Development and application of various systems for selection of materials and processing will be studied.

### **RD-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RD-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **RD-320 Prototype Development and Model Making**

3 cr.

Repeatable for Credit: No

Introduction to model making and prototype development/construction. Competencies are developed in converting design, research and development and other creative ideas into three- dimensional objects using traditional and nontraditional machining and forming techniques. Three-dimensional design problems form the core of this course.

*Prerequisites: take MFGT-110 or MFGT-150 or PKG-210*

### **RD-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RD-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **RD-420 Research and Development**

2 cr.

Repeatable for Credit: No

Research and development procedures applied to specific industrial material and processing problems.

*Concurrent enrollment required in RD 421*

### **RD-421 Research and Development Laboratory**

1 cr.

Repeatable for Credit: No

This lab is taken in conjunction with RD 420 to allow students in technical majors to fulfill the requirements of the major research and design project.

*Concurrent enrollment required in RD 420*

### **RD-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RD-498 Field Experience**



1-2 cr.

Repeatable for Credit: No

Department consent

### **RD-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **Risk Control**

### **RC-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **RC-271 Safety Principles and Practices**

3 cr.

Repeatable for Credit: No

Principles of accident prevention; school safety programs; identification of resources and content: motor vehicle, home, public, farm, industrial, school, recreational and civil defense.

Department Consent

### **RC-301 Context of Current Traffic Safety Education**

1 cr.

Repeatable for Credit: No

Structured analysis of regulatory, curricular and societal issues in traffic safety education.

### **RC-301 Current Issues in Traffic Safety Education**

1 cr.

Repeatable for Credit: Yes

Structured analysis of regulatory and curricular issues for traffic safety educators.

### **RC-301 Workshop: Traffic Safety Education Techniques and Management**

1 cr.

Repeatable for Credit: No

Structured analysis of program management, regulatory, and curricular issues for which traffic safety educators should be conversant.

### **RC-371 Alcohol, Drugs and Accident Prevention**

3 cr.

Repeatable for Credit: No

Impact of alcohol and drug use on accident prevention programs; current efforts to rehabilitate alcohol and drug abusers.

Department Consent

### **RC-372 Behavior Approach to Accident Prevention**

3 cr.

Repeatable for Credit: No

Behavioral aspects of accident prevention from physiological, psychological, sociological and cultural perspectives; identifying, understanding and modifying attitudes and behavior.

Department Consent

### **RC-374 Driver Education Laboratory Methods and Techniques**

3 cr.

Repeatable for Credit: No

Role, aims and objectives of laboratory programs in driver and traffic safety education; multiple- student teaching techniques, simulation on-street behind-the-wheel and multiple-car driving range experiences provided.

Department Consent

### **RC-375 Driver And Traffic Safety**

3 cr.

Repeatable for Credit: No

Classroom phase of driver education: curriculum selection and use, instructional resources and materials, and driver education administration.

Department Consent

### **RC-381 Principles of Occupational Risk Control/Safety**

2-3 cr.

Repeatable for Credit: No

Introduction to risk control/safety approaches intended to protect employee, property, legal, environmental, and financial-based assets through the development of internal practices/standards that promote the systematic anticipation, identification, analysis and control of risks that are inherent to the operation.

*Must be Junior level or higher*

### **RC-383 Occupational Safety and Health Standards**

3 cr.

Repeatable for Credit: No

Understanding and proper application of a range of regulations and standards relating to occupational safety and health.

### **RC-386 Fire Protection**

2 cr.

Repeatable for Credit: No

Behavior of fire: chemistry, protection, prevention and control.

### **RC-387 Human Factors Engineering/Ergonomics**

3 cr.

Repeatable for Credit: No

Physiological and psychological abilities in human/machine interface, working performance, reliability, comfort and safety; effective design of people and work environment as a cybernetic system.

### **RC-388 Construction Safety**

3 cr.

Repeatable for Credit: No

Overview of construction safety and health, including identification of the most common occupational hazards associated with the construction industry. Emphasis is on evaluating hazards, choosing appropriate controls to protect workers, and developing strategies for implementing these controls into effective management systems.

### **RC-389 Fleet Risk Control Management**

3 cr.

Repeatable for Credit: No

Logistically-oriented management systems required to control risk in fleet operations including internal standards development/analysis, emergency response, accident analysis, loss benchmarking, driver selection and training, vehicle operation, substance abuse testing, hours of service, vehicle maintenance/inspection, route planning, cargo/ personnel security, hazardous materials transportation, and regulatory controls.

*Prerequisite: take either RC-381 or RC-388*

### **RC-392 Construction Risk Management**

3 cr.

Repeatable for Credit: No

Analysis and application of fundamental process steps for construction job site risk management.

*Prerequisite: take RC-388*

### **RC-395 Emergency Preparedness and Response**

3 cr.

Repeatable for Credit: No

Specific emergency response plans that meet federal, state and local regulations.

### **RC-440 Environmental Leadership & Sustainable Management**

3 cr.

Repeatable for Credit: No

Examination and evaluation of topics related to environmental regulations, environmental leadership and sustainability management. Environmental and sustainability issues and management challenges will be analyzed and synthesized to provide a fundamental understanding of environmental regulations and management strategies to promote environmental protection and sustainability management.

*Prerequisite: Take RC-383*

## **RC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **RC-499 Independent Study**

1-3 cr.

Repeatable for Credit: No

Department consent

## **Russian**

### **RUS-101 Elementary Russian I**

4 cr.

#### **Communication Skills**

Repeatable for Credit: No

Elementary Russian for students with no previous training. Students develop a basic working vocabulary; practice dialogue skills and pronunciation; read and write alphabet and numerals; and listen effectively to a Russian speaker.

## **School Counseling**

### **SCOUN-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SCOUN-301 Introduction to Guidance**

2 cr.

Repeatable for Credit: No

Policies and practices of organized guidance programs in educational settings; historical, philosophical and cultural bases for guidance services; guidance techniques for teachers; cooperative efforts of teachers, parents and counselors.

### **SCOUN-400 Workshop: Counseling/Psychological Services**

1-3 cr.

Repeatable for Credit: Yes

### **SCOUN-405 Emerging Issues in School Counseling**

2 cr.

Repeatable for Credit: No

Identify, explore and research issues and trends impacting practice and resources in school counseling. Student must be currently employed in a school setting or licensed to work in schools.

### **SCOUN-447 Emotional and Behavioral Problems of Children and Adolescents**

3 cr.

Repeatable for Credit: No

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

### **SCOUN-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **School Psychology**

### **SPSY-490 Behavioral Interventions in the Schools**

2 cr.

Repeatable for Credit: No

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 education setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school interventions.

## **Science Education**

### **SCIED-409 Broadfield Science Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experiences in science education.

*Prerequisites: Benchmark I completed and Senior level*

### **SCIED-410 Biology Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in biology.

*Prerequisite: Benchmark II completion*

### **SCIED-411 Chemistry Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in chemistry.

*Prerequisite: Benchmark II completion*

### **SCIED-412 Physics Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in physics.

*Prerequisite: Benchmark II completion*

### **SCIED-413 Earth and Space Science Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in Earth and space science.

*Prerequisite: Benchmark II completion*

### **SCIED-414 Environmental Science Student Teaching**

2-16 cr.

Repeatable for Credit: No

Student teaching experience in environmental science.

*Prerequisite: Benchmark II completion*

### **SCIED-419 Broadfield Science Teaching Internship**

2-16 cr.

Repeatable for Credit: No

Internship experience in teaching broadfield science.

*Prerequisite: Benchmark II completion*

### **SCIED-420 Biology Teaching Internship**

2-16 cr.

Repeatable for Credit: No

Internship experience in teaching biology.

*Prerequisite: Benchmark II completion*

### **SCIED-421 Chemistry Teaching Internship**

2-16 cr.

Repeatable for Credit: No



Internship experience in teaching chemistry.

*Prerequisite: Benchmark II completion*

### **SCIED-422 Physics Teaching Internship**

2-16 cr.

Repeatable for Credit: No

Internship experience in teaching physics.

*Prerequisite: Benchmark II completion*

### **SCIED-423 Earth and Space Science Teaching Internship**

2-16 cr.

Repeatable for Credit: No

Internship experience in teaching earth and space science.

*Prerequisite: Benchmark II completion*

### **SCIED-424 Environmental Science Teaching Internship**

2-16 cr.

Repeatable for Credit: No

Internship experience in teaching environmental science.

*Prerequisite: Benchmark II completion*

### **SCIED-488 Internship Teaching - Science Education**

8-16 cr.

Repeatable for Credit: No

Alternative to student teaching experience: licensed and salaried internship in a cooperating school.

Department Consent

*Prerequisites: Benchmark II completion and Senior level*

## **Science, Technology and Mathematics Education**

### **CSTEM-125 Gender and Science, Technology, Engineering and Mathematics**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Issues surrounding women and men in STEM fields; representation of women in these fields, reasons for under-representation; global ethnic and historical perspectives.

**CSTEM-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**CSTEM-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department Consent

**CSTEM-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department Consent

**CSTEM-390 Technical Service Schools**

0.5-6 cr.

Repeatable for Credit: Yes

Some special-purpose technical courses offered by manufacturers are suitable for college credit. Guidelines: (1) Student makes all arrangements with manufacturer offering courses; (2) One credit is awarded for each full week (40 hours) of attendance; (3) Student enrolls and pays fees prior to taking course; (4) Approval of dean of school of industry and technology needed before enrolling for credit; (5) Graduate college approval required for students taking course for graduate credit.

Department Consent

### **CSTEM-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department Consent

### **STMED-101 Introduction to Math and Science Education**

2 cr.

Repeatable for Credit: No

Overview of math and science education programs, roles and responsibilities of math and science teachers, state and professional standards, history of math and science education, professional resources, curriculum, instruction, assessment, and classroom management.

### **STMED-160 Introduction to Technology and Science Education**

3 cr.

Repeatable for Credit: No

Survey of technology and science teaching, including teachers' responsibilities, curriculum, literature, current issues and organizations associated with the profession and teaching within K- 12 schools.

### **STMED-185 Pre-Student Teaching**

1 cr.

Repeatable for Credit: No

Introductory field experience and seminar includes observing, analyzing, and experiencing teaching in a public school setting.

Minimum of 50 hours completed.

*Prerequisite: Background check required.*

### **STMED-260 Curriculum Methods & Assessment for Science & Technology**

3 cr.

Repeatable for Credit: No

Development of rationales, goals, content outlines, outcomes, objectives, activities, and assessment items.

*Prerequisite: take STMED-101 or STMED-160*

### **STMED-360 Pre-Student Teaching in Science Technology and Math Education**

1 cr.

Repeatable for Credit: No

Observing, analyzing, experiencing, and reflecting on teaching in public school settings for STMED pre-service teachers.

Department Consent

*Prerequisites: Take STMED-101 or STMED-160, Benchmark 1 must be complete & background check is required.*

### **STMED-390 Laboratory and Classroom Management in Science and Technology**

3 cr.

Repeatable for Credit: No

Laboratory and classroom management strategies, conflict resolution, syllabi, paperwork, grading, communication, managing facilities and equipment, purchasing, maintenance, storage, lab and material safety, safety equipment, liability, and negligence.

*Prerequisite: Benchmark I Completed*

### **STMED-401 Capstone: Math and Science Education**

1 cr.

Repeatable for Credit: No

Synthesis of material learned in the math and science education program and study of educational research, evidence-based practice, and professional development.

*Prerequisite: Benchmark I completion*

### **STMED-460 Teaching Methods for Science and Technology Education**

3 cr.

Repeatable for Credit: No

Development and implementation of lessons, demonstrations, learning activities, and formative assessments.

*Prerequisites: Benchmark I completion and STMED-260*

## **Service Management**

### **SRVM-111 Introduction to Global Service Management-HT**

3 cr.

**Global Perspective**

Repeatable for Credit: No

Principles of service management with emphasis on trends, career opportunities, and global economic impact of service sectors.

**SRVM-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

**SRVM-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

**SRVM-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

**SRVM-354 Services Marketing Management-Ht**

3 cr.

Repeatable for Credit: No

Marketing management concepts, issues and terminology unique to the service sector. Strategies used by service marketers will be analyzed and contrasted with other economic sectors.

*Prerequisites: take HT-344 or BUMKG-330*

**SRVM-398 Service Management Field Experience**

1-2 cr.

Repeatable for Credit: No

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

### **SRVM-410 Electronic Service Management-Ht**

3 cr.

Repeatable for Credit: No

Overview, identification, and evaluation of service management components of electronic commerce relationships within the market/ workplace.

### **SRVM-420 International Service Concepts**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

National and cultural constraints and expectations that impact planning, execution, and evaluation of service quality. Cultural, business, managerial and behavioral foundations supporting success in an international service context.

*Prerequisite: take SRVM-111*

### **SRVM-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department Consent

### **SRVM-498 Service Management Field Experience-HT**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

Department Consent

Must be Senior level or higher

## **SRVM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Social Work**

### **SOCWK-205 Introduction to Social Work**

3 cr.

Repeatable for Credit: No

Social work as a profession; history and philosophy of social services; information for teachers, counselors and those interested in the field.

*Prerequisite: take SOC-110*

### **SOCWK-420 Human Behavior and Social Environment**

3 cr.

Repeatable for Credit: No

Biological, ecological, sociological, cultural, psychological and spiritual development focused on the social systems of the individual, family, group, organizational and community; structures used to promote or deter health and well-being. Human development within the social environment from micro, meso and macro perspectives and theoretical frameworks. Apply core social work competencies.

*Prerequisite: take SOC-110*

### **SOCWK-430 Social Casework Methods**

3 cr.

Repeatable for Credit: No

Dynamics of social casework: mobilizing individual capacities and community resources to promote adjustment between client and environment; social change.

*Prerequisite: take SOC-110*

### **SOCWK-440 Social Work Practice with Groups and Families**

3 cr.

Repeatable for Credit: No

Focus on assessment and intervention strategies with groups and families. Explore family dynamics and intervention strategies with an emphasis on strengths perspective. Theories of process group dynamics, the role of a group leader, and stages of group development, with a focus on cultural competence when working with groups and families.

### **SOCWK-450 Macro Social Work Practice**

3 cr.

Repeatable for Credit: No

Macro perspective in Social Work; person-in-environment; how to intervene and implement change. Systems theory, ecology theory, human behavior theories, assessment, planning, intervention and evaluation. Effect of policies on clients and social workers; how to lobby and write policies. Ethical dilemmas and ANSW Code of Ethics.

*Prerequisite: SOCWK-205*

### **SOCWK-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Sociology**

### **SOC-110 Introductory Sociology**

3 cr.

#### **Global Perspective, Social and Behavioral Sciences - Sociology**

Repeatable for Credit: No

Social interaction in human groups; relationships between individual and group; social inequality; basic social institutions, social change and current social trends; the socio-cultural diversity of groups; the infrastructure and interrelationships of social organizations; and alternative theoretical perspectives for explaining these social phenomenon.

### **SOC-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SOC-225 Social Problems**



3 cr.

**Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Sociology**

Repeatable for Credit: No

Sociological analysis of current social problems in the U.S. and the world.

**SOC-230 Sexualities in Historical and Social Perspective**

3 cr.

**Contrmporary Issues, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality.

Contemporary controversies such as gay marriage and other civil rights issues.

**SOC-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

**SOC-250 Social Psychology**

3 cr.

**Contemporary Issues**

Repeatable for Credit: No

Theory and application of social interaction; emphasis on communication.

**SOC-275 Sociology of Gender Roles**

3 cr.

**Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Sociological analysis of social roles played by the sexes.

**SOC-290 Global Political Ecology**

3 cr.

**Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

**SOC-291 Sociology of Health and Illness**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Sociological approaches to health and illness, both domestically and globally, with special emphasis on race and health. Topics include the social distribution of illness; health disparities across race/class/gender; global comparisons in the health of populations; the social construction of illness; the history and structure of health care systems and institutions; and various historical and contemporary health care debates. Health and illness will be considered throughout in terms of social justice and responsibility.

**SOC-293 Environmental Justice**

3 cr.

**Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Environmental racism; socio-economic inequality and exposure to environmental hazards; race, class, and environmental suffering; grassroots activism and opposition to environmental inequality and racism, particularly among U.S. minority groups; incorporation of environmental justice principles into public policy and corporate decision-making.

**SOC-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**SOC-310 Sexualities in Historical and Social Perspective**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category B**

Repeatable for Credit: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality. Contemporary controversies such as gay marriage and other civil rights issues.  
Must be Sophomore level or higher

### **SOC-315 Criminology**

3 cr.

Repeatable for Credit: No

Sociological analysis of structure and function of criminal law, variables of criminal behavior and operation of criminal justice system.

*Prerequisite: take SOC-110*

### **SOC-320 Social Movements in Global Perspective**

3 cr.

#### **Contemporary Issues, Racial & Ethnic Studies Category B, Global Perspective**

Repeatable for Credit: No

Social movements, collective action and activism; indigenous rights, labor organizing, civil rights, gender- and sexuality-based struggles, racial/ethnic identity formation and the claiming of rights, and anti-globalization activism in the U.S. and internationally; contested meanings of justice, citizenship, and democracy in a context of global capitalism.

### **SOC-325 Sociology of Leisure**

3 cr.

#### **Contemporary Issues, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Explanations of recreation and leisure structures and processes from multiple theories within sociology and economics; comparative case studies of recreation and leisure; ethical implications of how recreation and leisure are encouraged and pursued in a modern capitalist system, considering various philosophical perspectives of justice.

### **SOC-330 Social Theory**

3 cr.

Repeatable for Credit: No

Learning and applying advanced sociological and anthropological theories to social issues. Understanding various tools of explanation in the social sciences, as well as their origins, assumptions, and specific ways-of-knowing. Building a theoretical toolkit with the ability to compare, evaluate and synthesize theories for particular applications.

### **SOC-340 Sociology of Work**

3 cr.

Repeatable for Credit: No

Human behavior in various types of employment and occupations; trends in U.S. occupational structure.

### **SOC-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **SOC-350 Sociology of Hmong Culture**

1 cr.

Repeatable for Credit: No

Sociological overview of Hmong cultural values, history, immigration and resettlement experiences, family and clan functions, and spiritual beliefs and practices.

### **SOC-360 Sociology of Juvenile Delinquency**

3 cr.

Repeatable for Credit: No

Theories of delinquency, criminal behavior, and social control in relation to modern institutions in American culture.

*Prerequisite: take SOC-110*

### **SOC-375 Sociology of Minority Groups**

3 cr.

**Racial & Ethnic Studies Category A, Global Perspective**

Repeatable for Credit: No

Social/psychological aspects of interaction between majority and minority groups; trends among minorities in the United States.

### **SOC-385 Globalization and Social Change**

3 cr.

**Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Explanations of globalization processes and global governance from multiple perspectives among the social sciences, including sociology and economics; historical origins of global processes and structures; global social change and resistance; ethical implications of globalization outcomes regarding perspectives and distributions of justice.

**SOC-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

**SOC-400 Sociology of Altruism**

3 cr.

**Social and Behavioral Sciences - Sociology**

Repeatable for Credit: No

Sociological perspective of altruism explored in the context of volunteer public service, and biographies of exemplary public service participants.

Department Consent

*Prerequisite: Acceptance into University Honors Program*

**SOC-410 Sociology of Thailand's Minority Groups: Study Abroad Program**

4 cr.

**Global Perspective**

Repeatable for Credit: No

Study abroad program to Thailand. In-depth experiential learning of Thai minority cultures, including religions, socio-political status, Buddhism, health, education, trafficking of women and children, limited citizenship status, and poverty. Field trips to villages, nongovernmental agencies, schools, and clinics.

**SOC-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **SOC-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Spanish**

### **SPAN-103 Elementary Spanish I**

4 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Understanding, speaking, reading and writing in Spanish. Culture of Spanish-speaking peoples, including those in the United States. Grammatical gender, present and past tense verbs, pronouns, adjectives. Supplementary work with audiotapes and computers. Not available for credit to students who took SPAN-121 or SPAN-122. Only one Spanish course counts toward Ethnic Studies.

*Not available for credit to students who took SPAN-121 or SPAN-122*

### **SPAN-104 Elementary Spanish II**

4 cr.

#### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Second level of understanding, speaking, reading and writing in Spanish. topics in the culture of Spanish-speaking people, including those in the United States. Compound verb tenses, the subjunctive and commands. Supplementary work with audiotapes and computers. Requires one year of H.S. Spanish or SPAN-103 or SPAN-122.

*Prerequisites: One year of H.S. Spanish, or SPAN-103, or SPAN-122*

### **SPAN-121 Practical Spanish I**

2 cr.

#### **Foreign Language Global Perspective**

Repeatable for Credit: No

Pronunciation, basic phrases for everyday situations, comprehension and production of short written and spoken sentences, basic grammar summary, introductory vocabulary, language in Hispanic and Hispanic-American cultural context. Not available for credit to students who took SPAN-103. Only one Spanish course counts toward Ethnic Studies.

*Not for credit to students who took SPAN-103.*

## **SPAN-122 Practical Spanish II**

2 cr.

### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Second quarter college Spanish. Vocabulary, conversational patterns, irregular present tense verbs, regular and some irregular preterit verbs; object pronouns. Spanish language in the context of Hispanic culture. Not available for credit to students who took SPAN-103. One semester of H.S. Spanish or SPAN-121 is required. Only one Spanish course counts for Ethnic Studies.

*Prerequisite: take SPAN-121; not available for credit to students who took SPAN-103.*

## **SPAN-201 Intermediate Spanish I**

4 cr.

### **Foreign Language and Culture, Foreign Language Global Perspective**

Repeatable for Credit: No

Extensive development of vocabulary including common idioms, aural comprehension, correct pronunciation and recognition of verb tenses. Readings and class discussion based on historical background and contemporary Hispanic life, including Hispanic culture in the United States. Two years of H.S. Spanish or SPAN-104 is required. Only one Spanish course counts for Ethnic Studies.

*Prerequisite: 2 years of H.S. Spanish or SPAN-104*

## **SPAN-202 Intermediate Spanish II**

4 cr.

### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: No

Complete grammar review of standard Spanish, applicable to both conversational situations and business or personal correspondence. Review of essential vocabulary and phrases. Accuracy and fluency in spontaneous conversation and free composition. SPAN-104 or three years of H.S. Spanish is recommended. Students may incur incidental expenses for software.

*Prerequisite recommendation: SPAN-104 or at least 3 years of HS Spanish*

## **SPAN-227 Spanish Composition and Conversation I**

2 cr.

### **Communication Skills Language, Foreign Language Global Perspective**

Repeatable for Credit: Yes

Fifth semester college Spanish. Advanced grammar review. Introduction to composition. Writing paragraphs and short essays. Advanced conversation. Emphasis on native-like pronunciation, vocabulary and structural fluency. Only one Spanish course counts as Ethnic Studies.

*Prerequisite: 4 years of H.S. Spanish or SPAN-202*

### **SPAN-229 Hispanic Literature in America**

2 cr.

#### **Foreign Language and Culture, Racial & Ethnic Studies Category B, Foreign Language Global Perspective**

Repeatable for Credit: No

Sixth semester college Spanish. Themes and techniques of Hispanic literature. Vocabulary in Spanish for discussion of a variety of literary genres. Historical and cultural contexts. Emphasis on increasing oral and written fluency in Spanish.

*Prerequisite: 4 years of H.S. Spanish or SPAN-202*

### **SPAN-299 Independent Study**

1-3 cr.

#### **Foreign Language Global Perspective**

Repeatable for Credit: Yes

Department Consent

### **SPAN-304 Latin American Short Story**

2 cr.

#### **Foreign Language and Culture, Foreign Language Global Perspective**

Repeatable for Credit: No

Introduction to the 20th and 21st century Latin American short story. Vocabulary and readings in Spanish of prominent authors and distinct literary periods of this genre. Related historical and cultural contexts. Taught in Spanish.

*Prerequisite: 4 years of H.S. Spanish or SPAN-202*

### **SPAN-318 Cinema for Spanish Proficiency**

2 cr.

#### **Foreign Language Global Perspective**

Repeatable for Credit: No

Sixth semester college Spanish course on topics for language practice. Outstanding films from the Spanish-speaking world on themes of cultural relevance; advanced composition; advanced conversation and discussion. Taught in Spanish.

*Prerequisite: take SPAN-227*

### **SPAN-399 Independent Study**

1-3 cr.



**Foreign Language Global Perspective**

Repeatable for Credit: Yes

Department Consent

**SPAN-499 Independent Study**

1-3 cr.

**Foreign Language Global Perspective**

Repeatable for Credit: Yes

Department Consent

**Speech Communication****SPCOM-100 Fundamentals of Speech**

2-3 cr.

**Communication Skills - Speaking**

Repeatable for Credit: No

Techniques of effective speech: diagnosis of individual needs and training in necessary skills; speaker/listener relations, speech organization, voice, bodily action, language and development of confidence and poise.

**SPCOM-101 Forensics**

1-2 cr.

Repeatable for Credit: Yes

Training in speech through instruction in and application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department Consent

**SPCOM-102 Forensics**

1-2 cr.

Repeatable for Credit: Yes

Training in speech through instruction in an application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department Consent

*Prerequisite: take SPCOM-101*

### **SPCOM-103 Forensics**

1-2 cr.

Repeatable for Credit: Yes

Training in speech through instruction in an application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department Consent

*Prerequisite: take SPCOM-102*

### **SPCOM-104 Forensics**

1-2 cr.

Repeatable for Credit: Yes

Training in speech through instruction in and application of the principles used in intercollegiate forensics program; specific emphasis on forensics administration.

Department Consent

*Prerequisite: take SPCOM-103*

### **SPCOM-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPCOM-200 Persuasive Speaking**

2 cr.

#### **Communication Skills - Speaking**

Repeatable for Credit: No

Advanced techniques of speaking; develop skill in audience analysis, speech composition and delivery of various types of speeches; recognize techniques used daily toward individuals and groups.

*Prerequisite: take SPCOM-100*

### **SPCOM-206 Discussion**

2 cr.

#### **Communication Skills - Speaking**

Repeatable for Credit: No

Principles and techniques of discussion; leading and participating in symposium, panel, roundtable and other discussion forms.

### **SPCOM-208 Theory of Communication**

3 cr.

#### **Communication Skills - Speaking**

Repeatable for Credit: No

How people communicate with each other; interpersonal, social, technical and business communication, monographs of various communication theorists.

*Prerequisite: take SPCOM-100*

### **SPCOM-210 Interpersonal Speech Communication**

2 cr.

#### **Communication Skills - Speaking**

Repeatable for Credit: No

Basic aspects of non-structured, informal speech communication; expression of feelings and intentions and processing of relationships.

### **SPCOM-236 Listening**

2 cr.

#### **Communication Skills - Speaking**

Repeatable for Credit: No

Theoretical analysis and practical application of listening concepts. Emphasis on assessment of individual listening skills and methods of improving personal listening techniques used in occupational and personal relationships.

### **SPCOM-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPCOM-308 Speech Skills for Business and Industry**

2 cr.

Repeatable for Credit: No

Professional communication; projects emphasizing the application of oral presentation skills in business and professional contexts.

### **SPCOM-312 Intercultural Communication**

3 cr.

#### **Contemporary Issues, Communication Skills, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Communication concepts and strategies in a global multicultural society examining domestic racial and ethnic groups: communication norms in cultures of origin and functional appreciation of cultural diversity in social networks using verbal, nonverbal and group communication. Relevant concepts include identity formation, perception, worldview context, social stratification, racism, ethics, and language.

*Prerequisite: take SPCOM-100*

### **SPCOM-350 Nonverbal Communication**

3 cr.

Repeatable for Credit: No

Theories and research involved in understanding and applying nonverbal skills in personal, professional and technologically-enhanced environments.

### **SPCOM-370 Communicating in Health Contexts**

3 cr.

Repeatable for Credit: No

Theories and practical approaches to interactions about health- and wellness-related issues. Addresses perspectives on health communication in interpersonal, clinical, small group, and organizational contexts. Explains communication issues that exist in health care encounters, and discusses the influences of culture on health communication.

### **SPCOM-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPCOM-400 Special topics in Communication Seminar**

1-3 cr.

Repeatable for Credit: Yes

Current issues or historical topics related to communication. Specific topic will be advertised prior to semester offered. Course may be repeated three times with different topics or issues.

*Prerequisite: take SPCOM-100. Must be Junior level or higher*

### **SPCOM-414 Interviewing**

1 cr.

Repeatable for Credit: No

Principles and techniques for interviewee in employment interviews.

### **SPCOM-425 Informational Interviewing Skills for Professionals**

1 cr.

Repeatable for Credit: No

Theories and methodologies used in the collection and interpretation of data for research and professional development purposes.

*Prerequisite: take SPCOM-100*

### **SPCOM-470 Special Topics in Health Communication**

3 cr.

In-depth study of special topics in the field of health communication.

### **SPCOM-475 Applied Health Communication Capstone**

3 cr.

Repeatable for Credit: No

Completion of an original research or field experience project for business or industry. Results in either a deliverable for a client with a project report or a research paper.

### **SPCOM-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Special Education**

### **SPED-100 Introduction to Special Education**

1 cr.

Repeatable for Credit: No

Introduction to the special education profession. Survey of the history, philosophy, mission, legislation, issues, organization, and resources associated with the profession; and introduction to the professional standards and content guidelines.

### **SPED-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPED-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPED-300 Introduction to Individuals with Cognitive Disabilities**

3 cr.

Repeatable for Credit: No

Introduction to etiology of mental retardation; psychological, educational, social and vocational aspects; adjustment techniques used in working with mentally retarded persons.

### **SPED-301 Learning Disabilities**

3 cr.

Repeatable for Credit: No

Identification, remediation and evaluation of learning disabled; intervention techniques used with adolescents and adults.

### **SPED-305 Early Childhood Inclusion of Students with Exceptional Needs**

3 cr.

Repeatable for Credit: No

History and purpose of Early Childhood Special Education. Programming; legislation; population receiving services; adaptations; strategies; family intervention; intervention models; inclusion of all students in the natural environment or least restrictive environment.

*Prerequisite: take ECE-100*

### **SPED-310 ECSE Methods, Materials and Curriculum**

3 cr.

Repeatable for Credit: No

Curricular and methodological adaptation; embedding goals and objectives for young children with exceptional needs in the areas of social-emotional development, motor skills, self-help skills, communication, cognitive development.

*Prerequisite: take SPED-305*

### **SPED-315 Early Childhood Special Education Organization and Implementation**

3 cr.

Repeatable for Credit: No

Organization and implementation of Early Childhood Special Education programs. Service delivery; itinerant services; consultation and collaboration; and intervention models.

*Prerequisite: take SPED-305*

### **SPED-320 Early Childhood Special Education Assessment**

3 cr.

Repeatable for Credit: No

Supervised practice in assessment of young children with suspected or identified developmental delays. Standardized and informal assessment instruments for screening; determining eligibility for special needs programming; and progress monitoring of early learning in early childhood children.

*Prerequisites: SPED-305, SPED-310, and SPED-315*

### **SPED-322 Curriculum & Instruction: Severe Disabilities**

2 cr.

Repeatable for Credit: No

Curriculum and instruction strategies for teaching functional academics, personal/social, vocational, and community living skills to individual with sever and profound disabilities.

*Prerequisite: Benchmark I completion, SPED-300 and SPED-430*

### **SPED-323 Mild Disabilities: Social Studies and Science**

3 cr.

Repeatable for Credit: No

Curriculum and methods of teaching students with mild cognitive, learning, and emotional/behavioral disabilities in the content areas of social studies, science, and in general education. Strategies that facilitate integration, improve maintenance and generalization of skills, promote transitions, increase self-awareness and self-management, and compensate for learning deficits.

*Prerequisites: must have completed Benchmark 1, and take SPED-300, SPED-301, SPED-430*

### **SPED-324 Curriculum & Instruction: Career & Transition Education**

3 cr.

Repeatable for Credit: No

Curriculum and instruction for persons with disabilities in prevocational, career education, career preparation, and transition, stressing collaboration between education, community-based service providers, and families.

*Prerequisite: Benchmark 1 completion, SPED-300 and SPED-430*

### **SPED-326 Pre-Student Teaching: Cognitive Disabilities**

2 cr.

Repeatable for Credit: Yes

Supervised experience in observing, planning instruction, and teaching children and youth with cognitive disabilities in a cross-categorical school environment. Repeatable three times for credit.

Department Consent

*Prerequisites: Benchmark 1 completion and SPED-300*

### **SPED-328 Assessment for Individual Education/ Transition Plans**

3 cr.

Repeatable for Credit: No

Diagnosing behavior and learning problems of students with exceptional education needs. Preparing individual educational and transitional plans based on comprehensive assessments.

*Benchmark 1 Completed*

### **SPED-330 Introduction to Communication Disorders**

3 cr.



Repeatable for Credit: No

Nature, causes of and methods used when working with individuals who have speech and language disorders.

### **SPED-336 Early Childhood Special Education Pre-Student Teaching**

2 cr.

Repeatable for Credit: No

Supervised experience in teaching children with exceptionalities. Instructional practices based on knowledge of the child, family, community, and the curriculum.

*Prerequisite: take SPED-305*

### **SPED-338 Pre-Student Teaching Children/Youth with Disabilities**

2 cr.

Repeatable for Credit: No

Supervised experience in observing, planning instruction, and teaching children and youth with disabilities in a cross-categorical school environment.

*Benchmark I Completed*

### **SPED-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **SPED-400 Workshop: Topics in Special Education**

1-3 cr.

Repeatable for Credit: No

Current specialized topics studied through experiential activities.

### **SPED-420 Schools, Families and Community Collaboration**

3 cr.

Repeatable for Credit: No

Theory, general principles and procedures for fostering collaborative partnerships among families, professionals, students and other service providers. Focuses on families with children who have disabilities.

*Benchmark I Completed*

### **SPED-430 Inclusion of Students with Exceptional Needs**

3 cr.

Repeatable for Credit: No

Inclusion of students with exceptional educational needs in the regular classroom setting. Laws, definition, characteristics, adaptations, strategies and transitional services that pertain to persons identified with: cognitive disability, learning disability, attention deficit hyperactivity disorder, emotional disability, autism, traumatic brain injury, speech and language disorders, visual and hearing loss, physical and other health impairments, and gifted and talented.

### **SPED-440 Diagnosis and Remediation of Literacy and Math Disabilities**

4 cr.

Repeatable for Credit: No

Curriculum, methods, assessment and remediation of teaching reading, math, and language to individuals with mild disabilities. Strategies that assess and evaluate, monitor progress, increase, maintain and generalize skills, facilitate integration, and compensate for learning deficits in the general and special education curricula.

*Prerequisites: Benchmark I completion, EDUC-380, EDUC-381, and RDGED 382*

### **SPED-447 Emotional and Behavioral Problems of Children and Adolescents**

3 cr.

Repeatable for Credit: No

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

### **SPED-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain experience in business, industry, or other. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **SPED-462 Classroom Management Techniques**

3 cr.

Repeatable for Credit: No

Techniques for motivating handicapped youth, individual and group discipline, behavior modification, educational organization, evaluation, and communication to enhance learning.

*Benchmark I Completed*

### **SPED-471 Introduction to Special Education and Professional Portfolio Development**

3 cr.

Repeatable for Credit: No

Survey of the history of the field, the philosophy of special education, the mission of the field, special education legislation and mandates, issues within the profession, influential organizations, and the basic principles of professional portfolio development.

### **SPED-472 Foundations of Autism Spectrum Disorder**

3 cr.

Repeatable for Credit: No

A foundation for understanding individuals with Autism spectrum Disorders (ASD) and its effect on the individuals' life and learning, through a comprehensive overview of the history, current literature, and best practices.

### **SPED-473 Behavioral Interventions and Positive Behavior Supports**

3 cr.

Repeatable for Credit: No

Study functional behavioral assessment (FBA) and behavioral intervention planning (BIP) for individualized behavior problems for students with Autism Spectrum Disorder and related disabilities in the PK-12 educational setting. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school collaboration.

### **SPED-474 Augmentative Communication and Social Skills**

3 cr.

Repeatable for Credit: No

Review current literature in supporting communication and social skills for individuals with Autism Spectrum Disorder; including best practices in assessment and implementation of augmentative and alternative communication interventions.

### **SPED-475 Assessment and Methodology of Autism Spectrum Disorder**

3 cr.

Repeatable for Credit: No

Critical review of assessment methods used in the identification of Autism Spectrum Disorder. Formal and informal assessment results are utilized to create an intervention plan that is responsive to the student's individual needs.

### **SPED-476 Practicum in Autism Spectrum Disorder**

3 cr.

Repeatable for Credit: No

Review of instructional techniques, adaptations, and modifications to develop individualized instruction for students with autism spectrum disorder. Aligning instruction to student learning and behavioral styles and assessment in the general education and special education settings.

Department Consent

### **SPED-481 Student Teaching: Special Education**

4-16 cr.

Repeatable for Credit: Yes

Directed special education teaching and community experience in selected off-campus schools.

Department Consent

*Prerequisites: take SPED-326 and SPED-462*

### **SPED-482 Student Teaching Early Childhood-Special Education**

4-8 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected infant-toddler, preschool, or school based programs for children with disabilities.

*Prerequisites: take SPED-320 and SPED-430*

### **SPED-488 Intern Teaching: Special Education**

16 cr.

Repeatable for Credit: No

An alternative method of obtaining Special Education student teaching experience. Interns receive license to teach and salaried appointment in a cooperating school for one semester.

Department Consent

*Prerequisites: take SPED-322, SPED-323, SPED-324, SPED-326, and SPED-462*

### **SPED-489 Intern Teaching Early Childhood: Special Education**

8-16 cr.

Repeatable for Credit: Yes

Directed teaching and community experiences in selected infant, toddler, preschool, or primary school-based programs for children with disabilities.

*Prerequisite: take SPED-320*

### **SPED-490 Behavioral Interventions in the Schools**

2 cr.

Repeatable for Credit: No

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 education setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school interventions.

Benchmark I Completed

### **SPED-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Statistics**

### **STAT-130 Elementary Statistics**

2 cr.

#### **Statistics**

Repeatable for Credit: No

Concepts and application of probability and statistics: data analysis (graphical displays, numerical summary measures); probability and probability distributions; concepts of statistical inference (estimation and hypothesis testing). Illustrated with output from statistical computing packages. Students may incur incidental expenses for software.

### **STAT-320 Statistical Methods**

3 cr.

## **Statistics**

Repeatable for Credit: No

Methods of describing data: graphical methods, numerical summary measures, exploratory data analysis. Probability, probability distributions, expected value. Sampling distributions. Statistical inference: estimation and hypothesis testing for one-sample and two-sample problems. Regression analysis. Demonstrating with standard statistical software packages. Students may incur incidental expenses for software.

*Prerequisite: Math Placement or MATH-120*

## **STAT-330 Probability and Statistics for Engineering and the Sciences**

3 cr.

Repeatable for Credit: No

Exploratory data analysis; basic probability, probability distributions, mathematical expectation, sampling distributions; basic statistical inference (estimation and hypothesis testing); topics in reliability.

*Prerequisite: take MATH-154 or MATH-157*

## **STAT-331 Probability and Mathematical Statistics I**

3 cr.

Repeatable for Credit: No

Sample spaces. Probability functions for discrete and continuous sample spaces. Conditional probability and independence. Random variables; probability density and cumulative distribution functions; joint, marginal, and conditional distributions. Expected values, moments, and moment-generating functions. Binomial, hypergeometric, Poisson, normal, and gamma distributions.

*Prerequisites: take MATH-154 or MATH-157. Prerequisite or concurrent enrollment in MATH-158*

## **STAT-332 Probability and Mathematical Statistics II**

3 cr.

Repeatable for Credit: No

Point estimation. Properties of point estimators: unbiasedness, efficiency, consistency, sufficiency. The method of maximum likelihood. Basic concepts of interval estimation and hypothesis testing. Inference in one-sample and two-sample problems. Simple linear regression analysis; the method of least squares. Goodness-of-fit tests. Analysis of categorical data.

*Prerequisite: take STAT-331*

## **STAT-440 Advanced Linear Modeling-Regression and Time Series Analysis**

3 cr.

Repeatable for Credit: No

Multiple regression, inference about regression parameters, remedial regression measures, quantitative and qualitative regression, model selection/validation, nonlinear regression, neural networks, logistic and Poisson regression, generalized linear

models, time series, smoothing, stochastic time series, moving average and autoregressive models, auto regressive integrated moving average (ARIMA), estimating and forecasting with time series.

*Prerequisite: take STAT-332*

### **STAT-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **Sustainable Management**

#### **SMGT-115 Environmental Science and Sustainability**

3 cr.

Repeatable for Credit: No

The interrelationships between humans and the environment. Important ecological concepts, human influence on the environment, and sustainable practices to avoid or ameliorate negative impacts. Ecological concepts are used throughout to identify, understand, and provide a better understanding of how humans can more positively affect the environment in which they live.

*B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

#### **SMGT-220 Systems Thinking**

3 cr.

Repeatable for Credit: No

Use of systems thinking to apply the concept of sustainability in various business, social, and scientific contexts. Rather than looking at a problem by analyzing component parts, students learn to analyze whole systems. Students model relationships and behaviors to identify leverage points for change.

*B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

#### **SMGT-230 Triple Bottom Line Accounting for Managers**

3 cr.

Repeatable for Credit: No

Financial and managerial accounting and how this information is used. Basic preparation of financial statements and their analytical use. How accounting information is applied by managers in decision-making process helping organizations meet the

triple bottom line: strong profits, healthy environment, and vital communities.

*Prerequisite: College Algebra. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-235 Economics in Society and Sustainability**

3 cr.

Repeatable for Credit: No

Economic, social, and environmental issues facing society. Traditional issues such as markets and prices (microeconomics), government economic management (macroeconomics), and international trade. Introduction of economic content into analysis of selected topics such as poverty and discrimination, the environment, and the provision of government services. Critiques of conventional economic thought, within the context of systems thinking and ecological economics, and integrated throughout the course.

*Prerequisite: College Algebra. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-240 Technical Writing for Sustainable Management**

3 cr.

Repeatable for Credit: No

The psychology and mechanics of written business communications are thoroughly explored and widely applied. Also included are non-written applications in such business areas as international/intercultural, nonverbal, and ethical communications.

*B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-310 Ecology for Sustainable Management**

3 cr.

Repeatable for Credit: No

Interrelationships of organisms with each other and their environments. Investigation into composition and dynamics of populations, communities, ecosystems, landscapes, and the biosphere with emphasis on sustainability. Enrollment in online Sustainable Management degree program required.

*Prerequisite: BIO 101. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-320 Energy for Sustainable Management**

3 cr.

Repeatable for Credit: No

Learn to apply basic engineering principles to existing and emerging energy technologies to provide a better understanding of energy production, consumption, and environmental impact; and how these principles relate to sustainable management. Topics



cover a wide range of energy systems including nuclear, fossil fuels, wind, solar, biofuels and biomass.

*Prerequisite: General Chemistry. For B.S. in Sustainable Management majors only or with permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-325 Natural Resource Management**

3 cr.

Repeatable for Credit: No

The interdependence between natural resources associated with land, air, and water. Explores significant environmental issues regarding the policies and problems in the use and management of natural resources related to soils, vegetation, landscape within the context of social needs and sustainability.

*B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-330 Marketing for a Sustainable World**

3 cr.

Repeatable for Credit: No

Analysis of an organization's opportunities to develop sustainability practices as they relate to the development of product, pricing, supply and distribution channels (retail, wholesale), promotion (advertising, sales promotion, public relations) and target markets.

*Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-331 Sustainable Organizational Finance**

3 cr.

Repeatable for Credit: No

Introduction to the theory and methods of sustainable organizational finance. Topics include financial statements; discounting and budgeting; uncertainty and risk/reward trade-offs; and assessing financial implications of the triple bottom line (e.g., climate change, carbon trading, human resource management, and creating environmentally-conscious shareholder value).

*Prerequisites: SMGT-230, and SMGT-325. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-332 Economics of Environmental Sustainability**

3 cr.

Repeatable for Credit: No

Interaction between market activity and the environment, applies economic analysis to the efficient and sustainable management of environmental goods and resources, and examines how economic institutions and policies can be changed to bring the environmental impacts of economic decision-making more into balance with human desires and the needs of the ecosystem.

*Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-335 Management and Environmental Information Systems**

3 cr.

Repeatable for Credit: No

Use of the computer as a problem-solving tool, as part of data processing systems; information systems and decision support tools for managers; information systems planning and development; overview of computer hardware, software, database management, networking and web technologies; green data centers; energy efficient trends in information technology; data and information usage in green businesses.

*Prerequisites: Take Statistics and SMGT-230. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-340 Organizational Behavior and Sustainability**

3 cr.

Repeatable for Credit: No

Management principles and theories underlying human behavior in organizations are investigated. Topics include personality, motivation, communication, decision-making, leadership, teamwork, ethics, power, diversity, and work stress. Constraints and opportunities of an "eco" friendly organization are realized.

*Prerequisite: Introductory Speech/Communication course. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-350 Operations Management and Sustainability**

3 cr.

Repeatable for Credit: No

The role of the operations function in an organization; linear programming; continuous and intermittent production processes; aggregate planning; inventory control; materials management; scheduling; project management; quality assurance; operations for green enterprises.

*Prerequisites: take STAT 130 and MATH-120. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-360 Environmental and Sustainability Policy**

3 cr.

Repeatable for Credit: No

Topics include the spectrum of historical, theoretical and technical issues applicable to sustainable management of natural resources, environmental quality standards and risk management. Administrative structures form the basis for selecting appropriate responses to complex management problems faced by industry, government and non-governmental agencies are

identified. The historical development and current framework of public policy are investigated, and specific foundational legislation is critiqued.

*Prerequisites: take SMGT-115. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-370 Logistics, Supply Chain Management, and Sustainability**

3 cr.

Repeatable for Credit: No

Concepts, functions, processes, and objectives of logistics and supply chain management activities. Activities involved in moving raw materials, inventory, and finished goods from point of origin to point of use or consumption. Planning, organization and controlling such activities. The role of supply chain processes in creating sustainable competitive advantage with respect to quality, flexibility, lead-time, and cost. Customer service, inventory management, transportation, warehousing, supply; chain management, reverse logistics, green supply chains, and international logistics.

*Prerequisite: take SMGT-350. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-430 International Management for a Sustainable World**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

zations. This includes socio-cultural aspects and group dynamics of international business and service organizations through the study of sustainable management practices - strong profitability, healthy environment, vital communities.

*Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-435 International Development and Sustainability**

3 cr.

Repeatable for Credit: No

Historical roots of the idea of development, economic theories of growth and their implications for sustainability, and interrelationships between population growth, food security, poverty, inequality, urbanization, technological change, international trade and environmental change at local, regional and global scales. Contemporary issues and alternatives.

*Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

### **SMGT-460 Environment and Society**

3 cr.

Repeatable for Credit: No

Introduce the fundamentals of human-environmental interaction; a grasp of how these interactions create problems; and how the elements of social, technological, and personal choices combine to overcome them.

*Prerequisites: take SMGT-115. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

## **Sustainability**

### **SUST-315 Sustainable Engineering**

3 cr.

Repeatable for Credit: No

Impact of engineering and design/manufacturing decisions on the environment. Topics include sustainability, energy and material flows, risk assessment, multi-use product life cycles, manufacturing process waste streams, sustainable product design issues, end-of-life product handling, and pollution prevention techniques.

Must be Junior level or higher

### **SUST-425 Sustainable Design & Development Capstone**

3 cr.

Repeatable for Credit: No

Application and study of sustainable design and development through the solution of a community-based project. Design of a triple bottom line solution to industrial problems will be emphasized.

*Prerequisite: take BIO-350*

### **SUST-432 Global Sustainability Experience in Design & Manufacturing**

3 cr.

#### **Global Perspective**

Repeatable for Credit: No

Cross-disciplinary exploration of ecologically-friendly design, engineering, manufacturing and business models. International travel component with corporate, cultural, academic and civic leaders. Cultural, economic and political influences; product design; manufacturing; sustainability; application of current eco-friendly product design models; research Topics; regional global visitation; studio and laboratory experiences; project and presentation.

Must be Junior level or higher

### **SUST-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

### **SUST-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

## **Technology**

### **TECH-230 Technology Dynamics**

3 cr.

#### **Technology**

Repeatable for Credit: No

Examine the process of technological change. Study the transfer of technological invention and innovation. Develop a framework for forecasting.

### **TECH-295 Honors Seminar in Technology**

2 cr.

#### **Technology**

Repeatable for Credit: No

Addresses a wide range of technological concepts along with examples of how technology impacts our lives as individuals, a society, and a global community. Delivered in seminar format.

### **TECH-340 Future of Work**

1-2 cr.

Repeatable for Credit: No

Future possibilities as to why people work, who will work, and in what conditions. Project probable work parameters from current trends. Relate past, present, and future to students' individual work situations.

### **TECH-375 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **TECH-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

## **Technology Education**

### **TECED-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TECED-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TECED-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **TECED-325 Technology for Elementary School Children**

2 cr.

Repeatable for Credit: No

Development, philosophy, objectives and course organization for industrial arts for the elementary schools. Suitable laboratory work in woods, metals, plastics and drawing.

### **TECED-330 Implementing Technology Education**

3 cr.

Repeatable for Credit: No

Converts the theory of contemporary technology education programs into instructional materials, facilities, and strategy suited to the secondary and post-secondary school.

### **TECED-333 Planning Technical/Vocational Laboratories**

2 cr.

Repeatable for Credit: No

School shop facility planning: equipment selection, placement, care and management.

### **TECED-340 Middle School Technology Education**

2 cr.

Repeatable for Credit: No

Reviews trends and activities in the technology education movement. Teach middle school offerings.

### **TECED-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TECED-370 Project Lead the Way: Gateway to Technology Seminar**

1 cr.

Repeatable for Credit: No

Overview of Project Lead the Way: Gateway to Technology. Advanced curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

*Prerequisites: take STMED-160 and TECED-340. Background check required.*

### **TECED-371 Project Lead the Way: Intro to Engineering Design Seminar**

1 cr.

Repeatable for Credit: No

Overview of Project Lead the Way: Introduction to Engineering Design Seminar. Curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

*Prerequisites: STMED-160, TECED-340, MFGT-110, and either INMGT-314 or RD-420*

### **TECED-372 Project Lead the Way - Principles of Engineering**

1 cr.

Repeatable for Credit: No

Overview of Project Lead the Way: Principles of Engineering. Curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

*Prerequisites: take MFGT-110, RD-205, ELEC-204 and either POWER 371 or ELEC-341. Background check required.*

### **TECED-375 Workshop:**

1-3 cr.

Repeatable for Credit: No

Current specialized topics in industrial education through experiential activities.

Instructor's Consent Required

### **TECED-398 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **TECED-398E Field Experience**

1 cr.

Repeatable for Credit: No

Department Consent



### **TECED-406 Evaluation in Technology/Vocational Education**

2 cr.

Repeatable for Credit: No

For industrial arts and vocational/technical teachers in evaluating program and student performance: basis for student assessment, evaluation of manipulative activity and construction of teacher-made tests as applied to all students (including those with special needs). Student evaluation of instructor and instruction.

### **TECED-408 Student Teaching Technology/Vocational Education**

8 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

Cum GPA 2.25 or higher

### **TECED-409 Student Teaching in Technology Education**

4-16 cr.

Repeatable for Credit: No

Directed teaching and community experiences in selected off-campus schools.

Department Consent

*Prerequisite: Benchmark II completion*

### **TECED-431 Field Trips to Industry**

1-3 cr.

Repeatable for Credit: Yes

Opportunities are provided for industrial and vocational education majors as well as teachers to accumulate information about industries through local and distant on-site visits to industries. A third credit may be earned by showing evidence of application of data collected in courses being taught.

Department Consent

### **TECED-437 Organization/Management of Technical Laboratories**

2 cr.

Repeatable for Credit: No

Experience in administration, project development and teaching problems associated with industrial education.

### **TECED-438 Course Construction**

2 cr.

Repeatable for Credit: No

Directed experience in curriculum development and course of study construction for industrial education teachers; development of behavioral objectives and of instructional materials to help reach these objectives; development of course of study, instructional package/unit of instruction.

### **TECED-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TECED-470 Project Lead the Way - Digital Electronics Seminar**

1 cr.

Repeatable for Credit: No

Overview of Project Lead the Way distance education curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

*Prerequisites: Take ELEC-204 and ELEC-271 and either POWER 371 or ELEC-341. Background check required.*

### **TECED-488 Internship Teaching**

2-8 cr.

Repeatable for Credit: No

An alternate method of obtaining student teaching experience. Teacher interns receive a license to teach and salaried appointments in cooperating school systems for one full semester.

Department Consent

### **TECED-489 Internship Teaching**

16 cr.

Repeatable for Credit: Yes

An alternate method of obtaining student teaching experience. Teacher interns receive a license to teach and salaried appointments in cooperating school systems for one full semester.

Department Consent

### **TECED-498 Field Experience**

1-2 cr.

Repeatable for Credit: No

Department Consent

### **TECED-498E Field Experience**

1 cr.

Repeatable for Credit: No

Department Consent

### **TECED-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Theatre**

### **THEA-131 Theater Practicum**

1 cr.

#### **Performing Arts**

Repeatable for Credit: Yes

Participation in acting, stagecraft, lights, sound, makeup, costumes, properties and business in university theater productions.

### **THEA-200 Stagecraft**

3 cr.

#### **Creative Arts**

Repeatable for Credit: No

Theatre backstage theory and techniques creating scenery and lighting for theatrical productions. Use of tools and technology in creating technical elements.

### **THEA-232 Introduction to the Theater**

3 cr.

#### **Performing Arts**

Repeatable for Credit: No

Development of theater arts from ancient times to present; play styles, production methods and audience appreciation; representative plays.

### **THEA-300 Special Topics in Theatre**

3 cr.

Repeatable for Credit: Yes

Current issues or historical topics related to theatre. Specific topics advertised prior to the semester offered. Repeatable up to three times with different topics or issues.

### **THEA-334 Contemporary Theater**

2 cr.

#### **Performing Arts**

Repeatable for Credit: No

Analysis of selected plays; structure, dramatic content and production methods.

### **THEA-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

## **Training and Human Resource Development**

### **TRHRD-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department Consent

### **TRHRD-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department Consent

### **TRHRD-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department Consent

### **TRHRD-360 Training Systems in Business and Industry**

3 cr.

Repeatable for Credit: No

Types and purpose of training as related to business and industry. Training analysis, content, delivery systems, evaluation and justification for training. Designed for non- education majors.

### **TRHRD-370 Training Methods in Business and Industry**

2 cr.

Repeatable for Credit: No

Identification of training situations where the development and delivery of training is needed. Emphasis is on methods to deliver a training session. Students will be required to make training sessions presentations.

### **TRHRD-375 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

### **TRHRD-389 Training Internship**

1-8 cr.

Repeatable for Credit: Yes

Opportunities for students to learn and practice training management and instructional techniques through activities and experiences in a training department. Objectives commensurate with student's background and field of training. Activities include designing and implementing training programs in student's major or minor field of study in either industry, business, military or government training programs.

Department Consent

TRHRD-360

### **TRHRD-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **TRHRD-400 Workshop**

1-3 cr.

Repeatable for Credit: Yes

Special topics in training and human resource development providing hands-on or experiential learning activities. Specific content and title to reflect topic of the workshop.

### **TRHRD-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department Consent

### **TRHRD-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Transdisciplinary**

### **TRDIS-101 Seminar in Career Exploration**

1 cr.

Repeatable for Credit: No

Identification and analysis of individual career interests, values, needs, skills, and goals. Investigation of resources for career planning and development, including educational programs, job market information and employment opportunities. Development of individual career plans.

### **TRDIS-120 Strategies for Academic Success**

1 cr.

Repeatable for Credit: No

Strategies for classroom success and for managing college life. Emotional intelligence, identity formation, autonomy, financial literacy as it relates to college life and beyond, interpersonal effectiveness, specific study skills, and communicating with others in a diverse and inclusive environment.

### **TRDIS-200 Short-Term Cultural Experience**

1 cr.

Repeatable for Credit: No

Short-term travel experience to U.S. regions delivered through Student Support Services grant-funded program. Available to active, participating students.

Instructor's Consent Required

Must be Sophomore level or higher

### **TRDIS-210 Technology, Fab Lab, and Society**

3 cr.

#### **Contemporary Issues**

Repeatable for Credit: No

Historical, social, political and technological survey of design and prototyping in context of digital fabrication spaces.

### **TRDIS-220 Insights into Innovation and Ideation**

3 cr.

**Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Develop insights into product/service/idea invention, innovation, and ethical economic and social value creation.

**TRDIS-296A Experience China: Society and Cultural Immersion**

3 cr.

**Foreign Language and Culture, Social and Behavioral Sciences - Sociology**

Repeatable for Credit: No

Intercultural communication and exposure, awareness and understanding of China, Chinese daily life and culture, and global citizenship. Assess and develop cultural understanding, assumptions, and adaptation.

Department Consent

**TRDIS-297 Wisconsin in Scotland Field Experience**

3 cr.

Repeatable for Credit: No

International field experience as unpaid volunteer in a business, educational, social service, or other non-profit organization in Scotland. Must be enrolled in Wisconsin in Scotland study abroad program.

**TRDIS-320 McNair Scholars Program Seminar I: Junior Introduction**

2 cr.

Repeatable for Credit: No

Introduction of McNair Scholars to the program. Preparation and planning for doctoral study in an academic discipline.

**TRDIS-325 McNair Scholars Program Seminar II: Junior Research Proposal**

2 cr.

Repeatable for Credit: No

Research proposal and preparation for summer research institute for McNair Scholars.

**TRDIS-330 McNair Scholars Program Seminar III: Senior Graduate School Preparation**

2 cr.



Repeatable for Credit: No

Preparation for the GRE and the graduate school application process for McNair Scholars.

### **TRDIS-335 McNair Scholars Program Seminar IV: Senior Capstone**

2 cr.

Repeatable for Credit: No

Transition to graduate school for McNair Scholars. Research dissemination and graduate school success strategies.

### **TRDIS-350 Applied Foreign Language Project**

2 cr.

#### **Global Perspective**

Repeatable for Credit: No

Application of foreign language to the context of a career related to the student's major program. Vocabulary, written communications, and oral interaction in the primary language of the Applied Foreign Language minor.

*Prerequisite: 16 credits in a foreign language*

### **TRDIS-477 International Study**

1-6 cr.

#### **Global Perspective**

Repeatable for Credit: Yes

Inter-institutional credit exchange for students accepted in university-approved study abroad or international exchange programs offered through the office of international programs at recognized/accredited institutions in other countries. The course may be repeated.

## **Transportation**

### **TRANS-149 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

## **TRANS-202 Transportation Systems**

2 cr.

### **Technology**

Repeatable for Credit: No

Effects of transportation on society. Comparisons of transportation modes on relative costs, speeds, reliability, efficiency, and more. Examination of vehicle structures, propulsion, suspension, guidance, control and support systems.

## **TRANS-203 Transportation Systems Lab**

1 cr.

Repeatable for Credit: No

Applications and reinforcement of transportation modes. Special projects and field trips.

## **TRANS-204 Energy Technology**

2 cr.

### **Technology**

Repeatable for Credit: No

The nature of energy, its discovery, conversion, and harnessing. Economic, environmental, political and social ramifications of energy- related choices.

## **TRANS-205 Energy Technology Lab**

1 cr.

Repeatable for Credit: No

Mechanical, electrical, fluid and thermal power projects.

*Prerequisite: take TRANS-204*

## **TRANS-249 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TRANS-349 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TRANS-395 Seminar**

1-2 cr.

Repeatable for Credit: Yes

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics.

### **TRANS-449 Cooperative Education Experience**

1-8 cr.

Repeatable for Credit: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department Consent

### **TRANS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Vocational Rehabilitation**

### **REHAB-101 Introduction to Rehabilitation**

3 cr.

Repeatable for Credit: No

An introduction to serving people with disabilities. Philosophy, history, legislation, concepts and processes, and careers in rehabilitation services.

### **REHAB-102 Community Resources**

3 cr.

Repeatable for Credit: No

Role of community resources in rehabilitation.

### **REHAB-149 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department Consent

### **REHAB-198 Field Experience in Rehabilitation**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various rehabilitation type careers.

Department Consent

*Prerequisite: take REHAB-101*

### **REHAB-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **REHAB-201 Pre Practicum in Rehabilitation**

1 cr.

Repeatable for Credit: No

Issues related to professional development, ethics, and career awareness in vocational rehabilitation and criminal justice.

*Prerequisites: take REHAB-101, REHAB-102, and REHAB-230*

### **REHAB-205 Rehabilitation Practicum**

3-4 cr.

Repeatable for Credit: No

Community based learning in application of rehabilitation concepts and principles. Includes weekly seminar for critique and skill development.

*Prerequisites: take REHAB-101 and REHAB-102, both with a C or better.*

### **REHAB-217 Law Enforcement Policies and Procedures**

2 cr.

Repeatable for Credit: No

Law enforcement policies, procedures, philosophies, ethics, and career awareness in criminal justice.

*Prerequisites: take REHAB 101 and REHAB 102*

### **REHAB-230 Psychosocial Aspects of Disability**

3 cr.

Repeatable for Credit: No

Subjective, objective, ethnic/cultural, and environmental factors related to the disability experience.

*Prerequisite: take REHAB-101*

### **REHAB-249 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department Consent

### **REHAB-298 Field Experience in Rehabilitation**

1-2 cr.

Repeatable for Credit: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various rehabilitation type careers.

Department Consent

*Prerequisite: take REHAB-101*

### **REHAB-299 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **REHAB-300 Special Topics in Rehabilitation**

1-2 cr.

Repeatable for Credit: Yes

Special topics not available through regular courses.

### **REHAB-300G Grantsmanship in the Helping Professions**

1-2 cr.

Repeatable for Credit: No

Explore grant writing in human service occupations and the necessity for such proposals as an element of change in society.

Methods used to seek funding sources and evaluate requests for proposals.

### **REHAB-300N Community-Based Rehabilitation Services**

1 cr.

Repeatable for Credit: No

An examination of national priorities for community-based services designed to enhance competitive employment options for severely disabled persons.

### **REHAB-305 Sign Language I**

3 cr.

#### **Communication Skills Language**

Repeatable for Credit: No

Basic course in manual communication with persons who are deaf. Intensive practice in expressive and receptive communication.

### **REHAB-306 Sign Language II**

3 cr.

**Communication Skills Language**

Repeatable for Credit: No

Intermediate course in manual communication with persons who are deaf. American sign language, increasing sign vocabulary and communication speed.

*Prerequisite: take REHAB-305*

**REHAB-310 Vocational Assessment Applications in Rehabilitation**

3 cr.

Repeatable for Credit: No

Common vocational assessment techniques used in rehabilitation settings with diverse populations. Students apply, interpret and synthesize assessment techniques such as consumer needs analysis, vocational interviewing, psychometric testing, occupational information, behavioral observation and work evaluation techniques to provide client feedback and promote informed career decision making.

*Prerequisites: take REHAB-101 and REHAB-102*

**REHAB-315 Rehabilitation and Criminal Justice**

3 cr.

Repeatable for Credit: No

Criminal justice system: process and individual rights. Crime data and criminal law, policing, adjudication. Process roles of corrections and professionals. Disability: demographics, issues and responses.

**REHAB-320 Rehabilitation and Chemical Dependency**

3 cr.

Repeatable for Credit: No

Chemical use and abuse with emphasis on the rehabilitation of persons who are chemically dependent and the historical and sociological implications of drug usage.

**REHAB-321 Rehabilitation of Public Offenders**

3 cr.

Repeatable for Credit: No

Emphasis on programs designed to rehabilitate persons who are public offenders and sociological issues connected with the judicial system.

**REHAB-325 Rehabilitation and Sensory Disability**

3 cr.

Repeatable for Credit: No

Introduction to persons with hearing and visual impairments or both. Methods and techniques used in sensory disability rehabilitation are discussed.

### **REHAB-327 Psychiatric Rehabilitation**

3 cr.

Repeatable for Credit: No

Goals and processes of psychiatric rehabilitation. Knowledge and application of skills for integrating diagnosis into planning and intervention with a focus on rehabilitation services for individuals with long-term mental illness in community-based settings.

*Prerequisites: take REHAB-230 and PSYC-361*

### **REHAB-333 Adolescent Substance Use and Abuse**

2 cr.

Repeatable for Credit: No

Major concepts, current trends, and culturally sensitive approaches in the assessment, prevention and treatment of adolescent alcohol and drug addiction.

### **REHAB-349 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department Consent

### **REHAB-350 Independent Living**

2 cr.

Repeatable for Credit: No

An overview of independent living programs in this country including evolution, goals, methods of service delivery, and management of the independent living program.

### **REHAB-351 Benefits Coordination: Practice and Application**



3 cr.

Repeatable for Credit: No

Benefits Specialist role and function; rehabilitation content applications. Benefits Program requirements: process and application.

*Prerequisite: take REHAB-102*

### **REHAB-355 Rehabilitation of the Older Disabled Worker**

2 cr.

Repeatable for Credit: No

Develop awareness and understanding of older disabled workers with a focus on implementing rehabilitation planning that enables continued participation in the work force or reinsertion into it following disability.

### **REHAB-360 Assistive Technology**

2 cr.

Repeatable for Credit: No

Provision of technology to enhance the lives of persons with disabilities. Delivery system, legislation, and issues related to funding are examined. Specific applications in communication, computers, mobility, and workstations and other technologies are reviewed.

### **REHAB-361 Microcomputer Applications in Rehabilitation**

2 cr.

Repeatable for Credit: No

Applications of microcomputer technology and adaptive devices in vocational evaluation, work adjustment, placement and administration.

### **REHAB-365 Laboratory in Rehabilitation Technology**

2 cr.

Repeatable for Credit: No

Experience utilizing technological aids/devices developed for persons with disabilities. Modify/adapt equipment to meet specific functional requirements. Construct switch/control mechanisms for equipment. Develop prototype solutions to vocational and independent living problems.

*Prerequisite: take REHAB-360*

### **REHAB-398 Rehabilitation Practicum**

4 cr.

Repeatable for Credit: Yes

Community-based learning in an approved position to further develop skills and understanding of the challenges and potentials of various careers working with persons with disabilities, older adults and/or offenders. Written and oral communication emphasis.

Department Consent

*Prerequisites: take REHAB-201 and COUN-405, each with a grade of "C" or better*

### **REHAB-399 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **REHAB-401 Principles and Techniques of Caseload Management**

2 cr.

Repeatable for Credit: No

Principles and techniques of implementing case load management in service of clients of state vocational rehabilitation counseling agencies or rehabilitation facilities.

*Prerequisite: take REHAB-230*

### **REHAB-402 Management of Non-Profit Organizations**

3 cr.

Repeatable for Credit: No

Principles and practices in the operation of non-profit organizations. Comparison of how non-profit and for-profit operations are affected by organizational structures and authority, budgeting practices, sources of income, personnel issues, strategic planning and program evaluation, and marketing. Application to community agencies.

### **REHAB-410 Job Placement Processes**

3 cr.

Repeatable for Credit: No

Placement theory and methods used to assist people with disabilities to obtain appropriate employment.

*Prerequisite: take REHAB-230*

### **REHAB-420 Psychological Testing of Individuals with Disabilities**

3 cr.

Repeatable for Credit: No

Use of common psychometric tests with specific emphasis on selection, evaluation, administration, scoring, and interpretation of standardized tests for individuals with disabilities, including those from diverse ethnic and cultural groups.

### **REHAB-449 Cooperative Education Experience**

1-6 cr.

Repeatable for Credit: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department Consent

### **REHAB-452 Group Processes in Rehabilitation Settings**

2 cr.

Repeatable for Credit: No

Theory and application of group processes in rehabilitation settings; direct experience as member and facilitator of a group.

### **REHAB-459 Workforce Development, Disability, and Socioeconomics**

3 cr.

Repeatable for Credit: No

Macro/micro influences that keep people unemployed and underemployed, including community, services, providers, employers, and families. Interface among legislative initiatives, disability, and life/work. Policy, strategies, and skills that promote effective intervention and change. Intended for professionals in the field.

### **REHAB-460 Rehabilitation in the Private Sector**

3 cr.

Repeatable for Credit: No

Case coordination to support maximum medical recovery and/or vocational rehabilitation of an injured person involved in insurance funded cases. Differences between public and private rehabilitation processes. Interviewing, planning, assessing transferable skills, placing in suitable work, and communicating with other involved individuals. Business practices, professional roles, and ethical issues.

*Prerequisite: take REHAB-310*

### **REHAB-461 Forensics for the Human Service Professional**

2 cr.

Repeatable for Credit: No

Terminology and practices associated with forensic for human service professionals. Strategies and materials related to preparation for testimony and expert witness testimony in a court of law and other legal settings.

### **REHAB-462 Absence Management**

3 cr.

Repeatable for Credit: No

Orientation to workers with disabilities in business and industry. Focus on reducing disability related costs, and the elimination of attitudinal and environmental barriers as they pertain to hiring, productivity, and retention of workers with disabilities.

Governmental requirements, linkage between business, community resources, and rehabilitation.

### **REHAB-470 Work Adjustment Services**

2-3 cr.

Repeatable for Credit: No

Principles and procedures of adjustment services. Emphasis upon the change and improvement of behavior. Supervised practical experience in interviewing, behavior observation, individual work adjustment planning, lesson plan development and report writing.

*Prerequisite: take REHAB-310*

### **REHAB-480 Advanced Rehabilitation Practicum**

4 cr.

Repeatable for Credit: No

Advanced experience in service delivery to persons with disabilities in varied agency/service settings related to student's designated rehabilitation concentration.

Department Consent

*Prerequisite: take REHAB-398*

### **REHAB-482 Sexuality and Disability**

2 cr.

Repeatable for Credit: No

Investigate sexuality as an integral part of the disability experience. Explore programs, techniques and personal biases in relation to sexuality of persons with disabilities.

### **REHAB-483 Vocational Counseling Issues**

2 cr.

Repeatable for Credit: No

Theoretical and applied approaches to vocational counseling and current research in vocational choice and career development as related to vocational counseling.

### **REHAB-488 Developing Collaborative Partnerships**

3 cr.

Repeatable for Credit: No

Development of professional relationships that are characterized by collaboration and respect for the consumer or student. Role of team members including human service professionals, consumer student, family members, school personnel, and community organization staff in collaborative decision making. Enhanced service delivery responsiveness through application of collaborative principles.

### **REHAB-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

## **Women and Gender Studies**

### **WGS-199 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **WGS-210 Introduction to Women and Gender Studies**

3 cr.

**Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective**

Repeatable for Credit: No

Interdisciplinary analysis of gender and discrimination, including an examination of history, science, art, and institutions throughout the U.S. and globally.

### **WGS-311 Topics in Women's Studies**

1-3 cr.

Repeatable for Credit: Yes

Exploring, from interdisciplinary perspective, new information and ideas in a selected area of significance to women's studies.

*Prerequisite: take WGS-210*

### **WGS-356 Gender in Cross Cultural Perspective**

3 cr.

#### **Global Perspective, Social Responsibility and Ethical Reasoning**

Repeatable for Credit: No

Gender roles in cross-cultural perspective, including the United States. Anthropological theories of gender and inequality.

Variation in domestic, social, economic, political, and religious roles; historical development of and contemporary changes in women's and men's roles; global influences and processes of change and improvement in the lives of modern women.

### **WGS-499 Independent Study**

1-3 cr.

Repeatable for Credit: Yes

Department Consent

### **Other Courses**

### **PHOTO-415 Advertising Photography**

3 cr.

Repeatable for Credit: No

A survey of the technical and conceptual aspects of still and moving image advertising photography trends and practices. The relationship between marketing, design and photography in communicating with target audiences through cross-channel media are stressed. A DSLR camera with full manual control in still and video capture modes is required. A special course fee applies.

*Prerequisite: take PHOTO-375*